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WORLD MARITIME UNIVERSITY  
MALMO, SWEDEN

THE SHIPPING INDUSTRY IN PAPUA NEW GUINEA  
AN EMPHASIS ON COASTAL SHIPPING

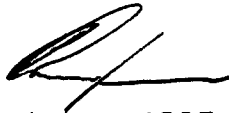
BY

CHRIS K. RUPEN  
PAPUA NEW GUINEA

A paper submitted to the Faculty of the World Maritime University in partial fulfillment of the requirements for the award of a

MASTER OF SCIENCE DEGREE  
in  
GENERAL MARITIME ADMINISTRATION

The contents of this paper reflect my personal views and are not necessarily endorsed by the UNIVERSITY.

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## PREFACE AND ACKNOWLEDGEMENT

This paper is titled "The Shipping Industry In Papua New Guinea" with an emphasis on coastal shipping. Like all island nations, Papua New Guinea is dependent upon the sea and ships. Shipping is the oldest and most important form of social and economic communication for the coastal island people, as is illustrated, for example by the continued celebration of the "Hiri Moale" in the Central Province, and the "Kula" trade in the Milne Bay area whereby coastal people sailed hundreds of miles to trade with their trading partners in other areas of Papua New Guinea. Over the years shipping has not lost its central role in the life of the nation, on the contrary the need for shipping has become more important. The type of shipping has changed, however, from the traditional canoe to the workboat and more recently to the large, modern cargo vessel. These changes have come about because of the need to transport larger volumes and units of cargo. The importance of shipping services has been overshadowed by the introduction of the truck and the aeroplane. But these forms of transport have their own specific roles to play which should be seen as complementary to shipping within the framework of Transport in Papua New Guinea.

As in all forms of development where industries grow larger and become more complex, the Government has a responsibility to ensure that the industries expand in the most efficient and safe manner. In order to control the expansion of the shipping industry the Papua New Guinea Merchant Shipping Act was introduced, and this legislation is enforced by the Marine Division of the Department of Transport.

The main task of this paper is to carry out a general survey of the current situation of coastal

shipping in Papua New Guinea, followed by an analysis of problems and recommendations for improvements in individual sectors. To this end discussion is divided into a treatment of Coastal Shipping Trade and Coastal Shipping Policy and Regulations. Much of the points raised are based on consultancy studies of coastal shipping together with discussions with coastal shipowners/operators in Papua New Guinea, and my own experience having worked in the Department of Transport for the last nine years, seven of which were within the Maritime Administration.

Basically the individual points covered are :

- a review of the Merchant Shipping (Coasting Trade) Act of 1977, and regulations applicable to the coastal shipping trade.

- a review of the functions, practices and composition of various authorities, in particular the Coasting Trade Committee that controls the issue of trading licences.

- a look at the freight rate fixing mechanisms currently in effect.

- safety at sea.

- analysis of existing problems and recommendations for an improved coastal shipping industry in Papua New Guinea.

Although emphasis is placed on coastal shipping, the National Government's participation in coastal shipping and to a limited extent overseas shipping, is also discussed. As 90% of Papua New Guinea's foreign trade is carried by foreign flag vessels and as it is Government's policy to get involved in overseas shipping and trade, some shipping policy options as well as some basic principles on joint ventures are presented. Papua New Guinea is one of the newly developing countries with a lot of

potential especially with regards the development of its vast mineral resources.

The importance and roles of shippers councils and freight study units in the formulation of sound shipping policies is stressed. These two organisations play a very important role in helping shippers to negotiate favourable shipping terms with conference lines. Therefore the need for an effective system of collecting shipping statistics is of critical importance to shippers councils if they are to have a strong bargaining power when negotiating with conferences.

With the recent discovery of oil and the development of fisheries in Papua New Guinea pollution prevention and combating, and the protection of the environment as a whole is a matter that Papua New Guinea must take very seriously.

As Papua New Guinea is very active in the South Pacific region various aspects of regional co-operation are discussed including ports, pollution prevention, maritime training and shipping in general. Regional co-operation in terms of pooling resources, manpower, equipment etc. is an obvious way of cutting costs thus a saving to countries in the region.

At this point I wish to express my gratitude to my Course Professor - Dr. Ahmed A. Monsef for his guidance and assistance and the staff of the World Maritime University in general who have been very helpful to me during my studies. To the International Maritime Organization, my appreciation for making it possible for me to come to this University.

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## ABBREVIATIONS

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PNG	Papua New Guinea
IMO	International Maritime Organisation
SPEC	South Pacific Bureau for Economic Co-operation
PFL	Pacific Forum Line
SPUMS	South Pacific Uniform Maritime Standards
UMS	Uniform Maritime Standards
FSU	Freight Study Unit
FSB	Freight Study Bureau
SPC	South Pacific Commission
ESCAP	Economic and Social Commission for Asia and the Pacific
SPREP	South Pacific Regional Environment Programme
LDC	London Dumping Convention
STCW	Standards of Training Certification and Watchkeeping
c.i.f	Cost Insurance and Freight
f.o.b.	Free On Board
CAF	Currency Adjustment Factor
BAF	Bunker Adjustment Factor
c&f	Cost and Freight
CCCN	Customs Co-operation Council Nomenclature
SITC	Standard International Trade Classification
ISO	International Standards Organisation

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## NATIONAL CURRENCY

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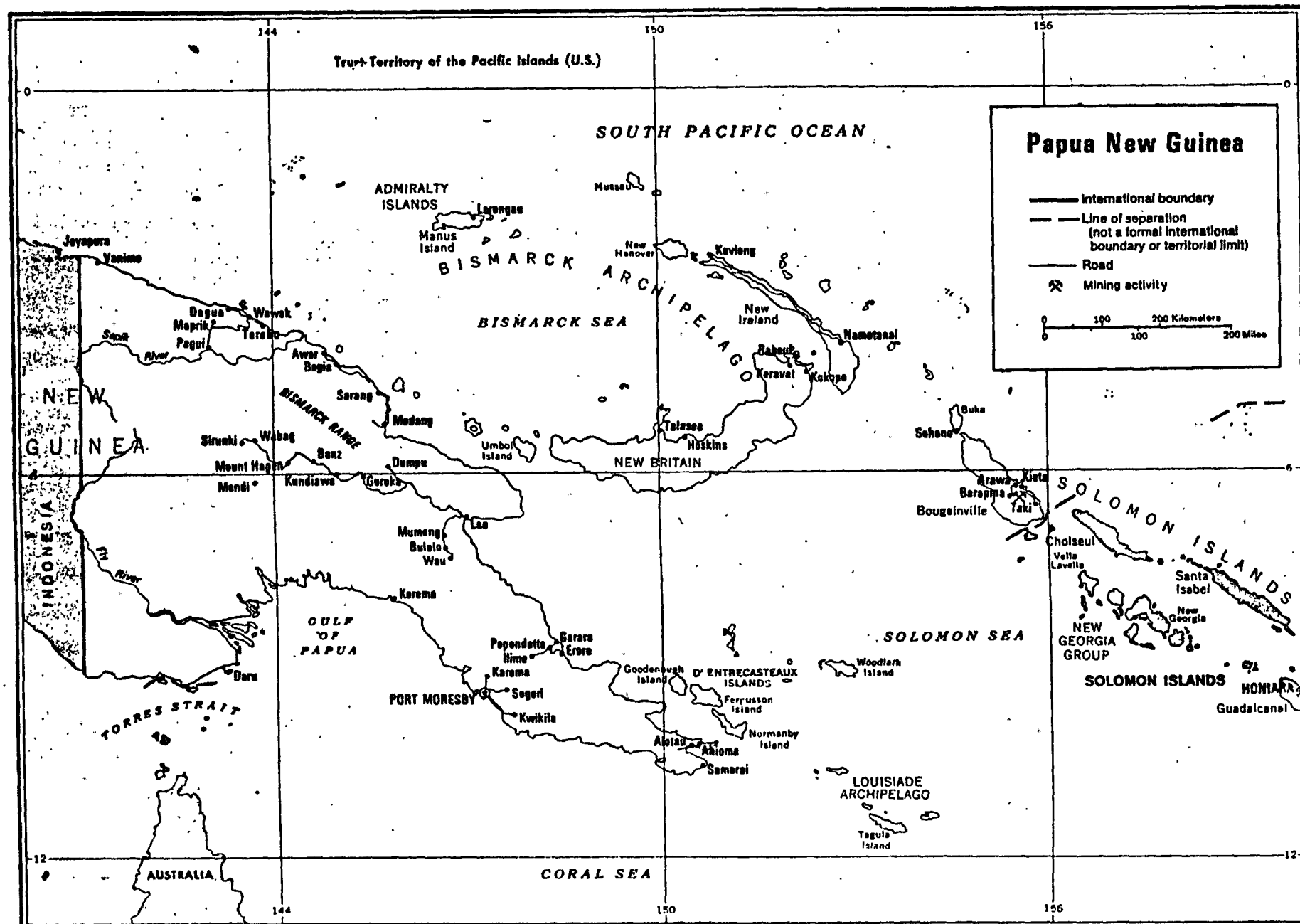
One Kina (K1) = 100 Toea

One USDollar = K0.90

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# THE SHIPPING INDUSTRY IN PAPUA NEW GUINEA

## AN EMPHASIS ON COASTAL SHIPPING

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### 1. INTRODUCTION

#### 1.1 History

The first Europeans to sight New Guinea were probably the Portuguese and Spanish navigators sailing in the South Pacific in the early part of the 16th century. Don Jorge de Meneses in 1526 - 27 accidentally came upon the principal island and is credited with naming it "Papua", a Malay word for the frizzled quality of Melanesian hair. The term "New Guinea" was applied to the island in 1545 by a Spaniard, Ynigo Ortis de Retez, because of a fancied resemblance between the islands' inhabitants and those found on the African Guinea coast. Although European navigators visited the islands and explored the coastlines for the next 170 years, little was known of the inhabitants until the late 19th century.

As a consequence of Europe's growing need for coconut oil, Goddeffroy's of Hamburg, the largest trading firm in the Pacific, began trading for copra in the New Guinea Islands. In 1884 Germany formally took possession of the northeast quarter of the island of New Guinea and put its administration in the hands of a chartered company. In 1899 the German Imperial Government assumed direct control of the territory, thereafter known as German New Guinea. In 1914 Australian troops occupied German New Guinea, and it remained under Australian military control until 1921. The British Government on behalf of the Commonwealth of Australia, assumed a mandate from the League of Nations for governing the Territory of New Guinea in 1920. It was administered under this mandate



until the Japanese invasion in December 1941 brought about the suspension of Australia civil administration.

On November 6, 1884, a British protectorate was proclaimed over the southern coast of New Guinea (the area called Papua) and its adjacent islands. The protectorate called British New Guinea, was annexed outright on September 4, 1888. The possession was placed under the authority of the Commonwealth of Australia in 1902. Following the passage of the Papua Act of 1905, British New Guinea became the Territory of Papua, and formal Australian administration began in 1906. Papua was administered under the Papua Act until the Japanese invasion. Following the surrender of the Japanese in 1945, civil administration of both Papua and New Guinea was restored, and under the Papua New Guinea Provisional Administration Act, 1945-46, both Papua and New Guinea were combined in an administrative union.

The Papua and New Guinea Act of 1949 formally approved the placing of New Guinea under the International Trusteeship system and confirmed the administrative union of New Guinea and Papua under the title of "The Territory of Papua and New Guinea". The Act provided for a Legislative Council (established in 1951), a judicial organisation, a public service, and a system of local government. A House of Assembly replaced the Legislative Council in 1963, and the First House of Assembly opened on June 8, 1964. In 1972 the name of the Territory was changed to Papua New Guinea. Elections in 1972 resulted in the formation of a Ministry headed by Chief Minister Michael Somare, who pledged to lead the country to self-government and then to independence. Papua New Guinea became self-governing in December 1973 and

achieved independence on September 16, 1975.

## 1.2 Geography And Population

---

Papua New Guinea, with a total land area of 462,840 square kilometres, lies in the Southwest Pacific about 160 kilometres northeast of Australia. It includes the eastern half of the island of New Guinea; the Bismark Archipelago, of which New Britain, New Ireland, and Manus are the largest islands; Bougainville and Buka Islands in the Western Solomons; and the Trobriand, Woodlark, D'Entrecasteaux, and Louisiade Island groups to the east of the New Guinea mainland. The main island comprises about 85% of the total land area. A complex system of mountains extends from the eastern end of the island to the western boundary with Indonesian Irian Jaya. Precipitous slopes, knife-sharp ridges, great outcroppings of mountains to heights of almost 4,752 metres, and broad upland valleys at altitudes of 1,500 - 3,000 metres characterise this area. Large rivers flow to the south, north and east; few are navigated except small boats in the lower reaches. The largest of them, the Fly, rises in the mountains of western Papua, flows over 1,100 kilometres through the southwestern plains, and can be navigated for 800 kilometres by shallow draft vessels drawing less than 2 metres. The same is true of the Sepik, which rises in the central cordillera but first flows northward and then east into the Bismark sea. Between the northern and central range of mountains is the Central Depression, which includes the valleys of the Sepik, Ramu, and Markham Rivers. Papua New Guinea lies wholly within the Tropics and its climate is monsoonal. The northwest monsoon season extends from December to March and the southeast monsoon from May to October. Average annual rainfall is

high, ranging from 200 to 250 centimetres for most districts. Many areas receive more than 500 centimetres. Temperatures are not extreme for a tropical climate, and most lowland, coastal, and island areas have a daily mean temperature of about 27°C. Seasonal variations are slight. In the highlands, temperature varies with altitude. At 1,830 metres, the mean temperature is about 16°C with day temperatures rising to 32°C and night temperatures falling to 4'-10°C. Lowland humidity is uniformly about 80% with very little seasonal variation.

The population of Papua New Guinea is estimated to be about 3.5 million, of which 72% live in the rural areas and 28% in urban areas. The main areas of population are in the highlands and eastern coastal areas of the island of New Guinea, and on the island of New Britain.

### 1.3 Government

-----

The Papua New Guinea constitution provides for a national legislative, executive, and judicial system. The Parliament is a single-chamber legislature based on a modified Westminster system consisting of members from open electorates proportioned by population, provincial electorates (one per province). Parliament currently has 89 open electorates and 20 provincial electorates with no nominated members. Members are elected under universal adult suffrage for a normal term of five(5) years.

Her Majesty Queen Elizabeth II of the United Kingdom is Chief of State, and she is represented in Papua New Guinea by a Governor-General. This appointment is made on the advice of the Papua New Guinea National Executive Council(Cabinet) following Parliament's decision on the

nominations. The Governor-General, who must be a Papua New Guinea citizen, acts under the advice of the National Executive Council. Executive power is vested in the Cabinet led by the Prime Minister - the leader of the majority party or coalition in the Parliament. The Cabinet is chosen by the Prime Minister from among the members of Parliament.

The Papua New Guinea legal system is based largely on that of the Commonwealth of Australia. The national judicial system consists of the Supreme Court, and such other courts as may be established. The Supreme Court is the final court of appeals; it has inherent powers to review all acts of the National Court and has original jurisdiction in constitutional matters.

#### 1.4 Economy

-----

Papua New Guinea's economy is based on its primary industries. More than two-thirds of the working population are engaged in subsistence agriculture, growing mainly roots and tubers, or small cash crop farming. After minerals, the country's principal exports are agricultural products, particularly copra, cocoa and coffee beans, timber and tuna fish.

A comparatively new development is the exploitation of Papua New Guinea's extensive mineral resources, chiefly copper, gold, silver and, more recently, petroleum. The main source of copper and gold is the island of Bougainville, where copper mining began in 1972. The development of a new mine at Ok Tedi, in the Star Mountains on the Mainland, was expected to place Papua New Guinea third among the world's gold-producing countries, after South Africa and the USSR. Production of gold at Ok Tedi began in May 1984, and two further stages, involving the mining

of gold and copper together and of copper alone, were scheduled to begin in 1987 and 1989 respectively.

The potential of other large gold deposits, at nearby Porgera and on Lihir Island (in New Island Province) are being assessed, and a site by the Ramu River, to the northeast of Ok Tedi, is estimated to contain major deposits of chromite, cobalt and nickel. Copper is the country's main export, accounting for about 54% of earnings. Assessment of the viability of extracting petroleum and natural gas discovered at a site between Nomad in Western Province and Tari in the Southern Highlands is being carried out. Papua New Guinea is predicted to become the leading oil exporter in South East Asia in the next decade. On the basis of official proven discoveries, Papua New Guinea could be exporting up to 100,000 barrels of oil a day by 1991. The country's estimated reserves are 500 million barrels of quality crude. In these sectors as in the development of hydroelectricity, foreign investment, particularly by Japan, Australia and the USA, is of paramount importance.

Forestry is a sizeable activity, and exports of sawn timber have increased steadily. Fishing mainly for prawns, tuna and perch, and secondary manufacturing, of beer, concrete, gases, paint and steel galvanizing, are developing sectors, although, once again, foreign capital is indispensable. In 1983 an expanding sugar industry in the Ramu Valley exported its first shipment of sugar, and provided the raw material for the production of ethyl alcohol (ethanol) as an alternative fuel. Australia is the biggest overall trading partner, however Japan takes the largest share (34.3%) of Papua New Guinea's exports. Japan is the major customer for copper ore and timber products. The USA, the Federal Republic of Germany, Singapore, and the United Kingdom also have substantial trade with Papua New

Guinea.

The Government's long-term policy aims at stability and self-reliance.. Producers have been protected, to a large extent, by the stabilisation funds which the Government has accumulated. A strong positive influence on the Papua New Guinea economy is direct Australian aid, which accounted for 59% of budget revenue before independence and still contributed 31.7% in 1985. Aid from Australia was due to be reduced, in real terms, by 5% per year under its 1981-86 programme, to amount to A\$1.326 million. In 1983, however, it was announced that no such cut would be made in 1982-83, and that in the ensuing three years aid would be reduced in real terms, by 1%, 2%, and 3% respectively.

PNG's External Trade figures are shown in TABLE 1.

TABLE 1.

## EXTERNAL TRADE

## PRINCIPAL COMMODITIES (K'000)

IMPORTS	1981	1982	1983
Food and Live Animals.	136,397	138,692	124,407
Beverages and tobacco.	8,364	8,388	7,466
Crude Materials, except fuel.	3,607	3,566	4,414
Mineral fuels, lubricants etc.	158,002	146,093	160,581
Animal and Vegetable oils and fats.	1,874	2,212	2,379
Chemicals.	45,036	39,319	60,522
Basic manufactures.	105,071	118,928	121,253
Machinery and transport equipment.	215,157	230,393	217,955
Miscellaneous manufactured articles.	54,477	58,873	55,441
Miscellaneous commodities and transactions.	10,151	10,203	8,552
TOTAL	738,136	756,667	762,970
EXPORTS f.o.b.	1981	1982	1983
Copra	19,316	12,878	23,981
Cocoa Beans	34,135	31,822	41,376
Coffee	74,218	77,780	97,659
Rubber	3,403	1,406	2,167

EXPORTS (contd.)	1981	1982	1983
Tea	7,131	6,682	10,391
Timber (logs)	31,517	49,312	43,209
Plywood	3,000	2,151	1,394
Tuna	19,974	1,439	289
Crayfish and Prawns	6,851	6,463	8,788
Copra Oil	12,508	12,110	22,038
Palm Oil	14,223	21,655	23,740
Copper Ore and Concentrates	292,320	292,342	370,692
Timber (lumber)	3,897	3,508	2,495
TOTAL (incl.others)	568,100	564,600	687,483

PRINCIPAL TRADING PARTNERS (K'000)

IMPORTS	1981	1982	1983
Australia	277,999	309,544	302,137
Germany, Fed, Republic	11,807	9,423	15,236
Hong Kong	15,018	15,310	14,386
Japan	119,245	107,856	114,750
Singapore	136,116	110,293	102,912
United Kingdom	31,658	34,041	30,116
USA	56,414	64,163	77,494

EXPORTS (incl.Gold)	1981	1982	1983
Australia	65,039	57,897	61,862
Germany, Fed. Republic	121,207	145,176	172,032
Japan	212,207	185,636	236,019
Spain	30,876	26,161	27,772
United Kingdom	28,235	32,808	40,212
USA	19,649	10,816	15,231

Source: The Europa year book Vol. II 1985



## 2. COASTAL SHIPPING

---

### 2.1 Historical Background

---

Papua New Guinea consists of four major islands and about 600 smaller islands. Coastal shipping therefore naturally plays an important role and is more or less the backbone of the domestic transport system in Papua New Guinea. This becomes further obvious when one takes into consideration the rugged terrain on the major islands, which makes road building expensive and difficult.

Air transport plays an important role between the various towns and local centres. However, bulk cargo transportation in Papua New Guinea depends on carriage by sea. The present coastal shipping is effected by various private shipping companies. The Government provides shore-based infrastructure and navigational aids, as well as crew training. Many of the coastal shipping operators are faced with severe problems due to lack of capital, old ships, shortage of experienced personnel, inefficient rate of cargo handling, overtonnage etc.

During the past 20 years there has been a great change in coastal shipping. It was established practice for all transport of cargo between the main ports to be effected by overseas ships; whether or not this was deliberate government policy or a hidden subsidy or whether this situation grew out of necessity is not clear, but it certainly had the effect of inhibiting the development of coastal shipping which at that time consisted mainly of a small fleet of old, inefficient wooden vessels serving the plantations and outer islands.

However, in the late sixties locally-owned vessels began to compete with vessels belonging to overseas shipowners for the coastal trade. The Government withdrew

its subsidy paid to Australian ships and actually prohibited the carrying of cargo along the coast by overseas ships. With the implementation of Government policy to restrict coastal trade to local vessels, there was, understandably, a growth in the coastal fleet. Just exactly what this growth was is difficult to assess, however, current records indicate that probably as many as forty coastal vessels of 60 dwt and over were built during the 1960's. The bulk of the coastal cargo, however, was still being carried in very old vessels which, because of their generally poor condition, and consequent inefficient operation, created a coastal shipping service based more on chance than choice. That is, you had no choice but to use the service but took a great chance that your cargo would arrive safely, and on time.

Another incidental factor which boosted the coastal trade was the lifting of the ban on the consumption of alcohol by the local population in 1962; today, the transport of beer and empties totals over 200,000 tons annually and represents about 40% of the coastal trade.

The 1970's saw several more small purpose built vessels enter the coastal trade, mainly servicing plantations and outlying mission stations. The most dramatic growth in numbers and, more accurately size, of the fleet occurred during the latter half of the decade and into the 1980's. Local owners began to gear up for the "container revolution" then being introduced by the overseas shipping lines servicing the Papua New Guinea / Australia run. It was at this time that the Government began its participation in coastal shipping on a commercial basis. This is discussed at a later stage in this paper. Finally, some of the traditional, larger, ship operators have completed fleet replacement programmes which has seen the introduction of several million dollars worth of ships onto the

coast, some of conventional type, but the majority being medium-sized dry cargo landing barges. We now have a situation whereby Papua New Guinea can boast some of the most modern purpose built vessels afloat. Yet it is still burdened with a host of problems which can only be solved through concerted efforts and understanding by Government, shipowners and users of shipping services in Papua New Guinea

## 2.2 Coastal Shipping Today

-----

### 2.2.1 Trade Routes and Services

Basically, there are three types of coastal shipping services currently in Papua New Guinea.

These are:

#### A. Mainport Services

This traffic includes all cargo carried between the following:

1. Alotau
2. Kavieng
3. Kieta
4. Kimbe
5. Lae
6. Lorengau
7. Madang
8. Oro Bay
9. Port Moresby
10. Rabaul
11. Samarai
12. Vanimu
13. Wewak

## B. Feeder Services

This traffic includes cargo carried between any of the afore-mentioned main-ports and the outports (and vice versa) in the following provinces:

1. Western Province:	15	Feeder-Ports
2. Gulf Province :	16	Feeder-Ports
3. Milne Province :	84	Feeder-Ports
4. Central Province:	16	Feeder-Ports
5. Northern Province:	9	Feeder-Ports
6. Morobe Province :	24	Feeder-Ports
7. Madang Province :	13	Feeder-Ports
8. East Sepik Province:	21	Feeder-Ports
9. West Sepik Province:	4	Feeder-Ports
10. Manus Province :	3	Feeder-Ports
11. New Ireland Province:	73	Feeder-Ports
12. West New Britain Province:	37	Feeder-Ports
13. East New Britain Province:	52	Feeder-Ports
14. North Solomons Province :	34	Feeder-Ports

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401 Feeder-Ports  
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## C. Village Level Services

Includes all cargo transport between the feeder-ports which are located in the afore-mentioned provinces. These are basically, vessels operating on coastal routes, but generally on river systems between villages.

Routes grew traditionally, especially in the feeder trades. Produce, usually copra, moved from village and plantation to those ports which could accomodate large overseas ships. Trade flowed in the opposite direction of

course as foodstuffs, consumer goods, machinery, fertilizer, etc. moved back to the outlying stations. This established a pattern still in evidence today. It is a fact that trade between the mainports grew as some overseas vessels began to limit their ports of call. However this growth accelerated in the 1970s as the economy expanded, and industrial base was established, and import substitution became a fact. Major shipments of beer, cigarettes, biscuits, flour, bottles, steel drums and paper products are now common place. With the intended growth in the local freezer trade (fish, chickens) and the shipments of Ramu sugar, the mainport trades appeared to have a small built-in safety factor which assisted the industry weather the economic storm. Today, the dry cargo coastal trade amounts to about 470,000 revenue tons per annum.

#### 2.2.2 Coastal and Sea Conditions

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Coastal shipping is the principal means of cargo transport due to the geographical characteristics of the country : a long coastline, a large number of offshore islands and a lack of road connections (economically not feasible).

River shipping in connection with coastal shipping exists mainly on the Sepik and Fly rivers. The mainland is also well provided with rivers. However, due to the low population density and navigational difficulties, shipping on these rivers, except for that carried out by dinghies and small boats, is of little importance. The Ok Tedi mining activities on the Fly River has considerably increased river shipping. Shipowners and all interested parties have been investigating the optimal type and size of ship or barge to meet the enormous navigational difficulties of the river as well as fulfilling the

economic requirements.

## 2.3 Current Fleet

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To service all areas of Papua New Guinea there is a commercial fleet of approximately 200 vessels in excess of 10 metres in length. The majority are less than 20 metres (about 64%) and service mainly the feeder and village level trades.

At the other end of the scale there is a group of five vessels serving exclusively the mainport trade. They range in size between 800 dwt and 3000 dwt. Below this level there is a fleet of 20-30 conventional and dry cargo barge type vessels (many equipped to carry passengers) which cater for the semi mainport and feeder trades. Finally, wet barges and coastal tankers make up the remainder of this diversified fleet.

It is in the area of semi mainport and feeder trades that the most significant investment in new tonnage has occurred over the past few years.

### 2.3.1 Registered Commercial Vessels

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Since 1975 when the Papua New Guinea Government imposed regulations on all ships in excess of 10 metres in length trading in Papua New Guinea waters, the number of coastal ships has steadily declined from approximately 350-400 ships to about 200 ships at present. The criteria for compulsory registration are laid down in Article 215A -Application- of the Merchant Shipping (Coastal Trade) Act 1977. The provision of this part, unless the contrary intention appears, does not appear to or in relation to a ship that is:

- (a) in the opinion of the registrar, of traditional

build;or

(b) less than 10 metres length;or

(c) a pleasure craft.

Furthermore, a vessel is exempt from the Merchant shipping (Safety) Regulation (No. 21 of 1976 in Part 1 - Introduction - under Article 1 h - Interpretation) if it is :

(h) a ship that is less than 10 metres in length.

In addition to the commercial fleet there is a government fleet of about 60 vessels. These are used for a variety of administrative tasks regarding supply of government Agencies. They are operated by the Department of Transport, Marine Division and, in addition to their administrative duties, they are occasionally hired out to other interested parties. They provide services to areas not normally served by commercial companies.

#### 2.4 Shipping Companies and Services

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Shipping companies in Papua New Guinea can be divided into two sectors:

- private companies
- government company

Only private companies are discussed here as the government company is being covered in another chapter.

The structures of the private coastal shipping companies vary greatly and can be analysed as follows:

Approximately 60% of the total capacity of the coastal fleet is owned only by a few operators, among which are the financially sound and more or less independent subsidiaries of foreign concerns which operate mainly on inter-mainport service. A further 30% of the total tonnage is operated in mainport/feeder-port traffic, with certain connections to the above-mentioned com-

panies. The remaining 10% of the tonnage is owned by about 40 smaller often one man/one boat, shipping companies which serve small coastal villages. Great differences can be observed among the coastal shipping companies regarding capital, management and standard of maintenance of the ships, and thus also in the corresponding efficiency and reliability of the transport services offered.

## 2.5 Freight Tariffs

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Under the Papua New Guinea Merchant Shipping (Coasting Trade) Act 1977, the minister can and does, fix maximum freight rates for coastal shipping services. This tariff is based on a mixed commodity (basic village foods attract lowest rates, general cargo a higher rate) and the distance between ports.

Articles 215R-215U of the Coasting Trade Act 1977 lay down the criteria for the legally binding freight rates, which are revised from time to time by the Minister for Transport and are binding for all vessels to which the Act applies.

Articles 215R-215U of the Merchant Shipping  
(Coasting Trade) Act 1977.  
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### - " 215R - Publication Of Recommended Rates.

(1) Subject to Subsection (2), where the Coasting Trade Committee makes a recommendation under Section 215Q (c), the Minister shall cause the recommendation to be published in the prescribed manner.

(2) At any time prior to publication under Subsection (1), the Coasting Trade Committee may by notice in writing to the Minister withdraw a recommendation made under Section 215Q(c).



"Division 5. - Maximum Rates for Shipping  
Services.  
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"215S - Investigation Of Rates For Shipping Services.

(1) In this section "recommended" means recommended to the Minister under Section 215Q(c).

"(2) Where the Minister is of the opinion that- (a) the recommended rates for shipping services are not at as low a level as is commercially viable; or

(b) the rates being charged for shipping services provided by a particular ship, or by ships within a particular class of ship -

(i) are too high; or

(ii) consistently exceed the recommended rates; or

(c) it is in the public interest to do so, he shall cause the recommended rates, or the rates being charged, as the case may be, to be investigated.

"215T.- Minister May Fix Maximum Rates For Shipping Services.

(1) The Minister may, after he has caused an investigation to be carried out under Section 215S(2), by notice published in the National Gazette, fix a maximum rate for a particular shipping service.

(2) In fixing a maximum rate under Subsection (1), the Minister shall have regard to any advice given to him by the Coasting Trade Committee under Section 215Q.

"215U.- Rates Not To Exceed Maximum Rates For Shipping Services.

A person who, in respect of the provision of a particular shipping service, charges a rate exceeding the maximum rate fixed under Section 215T(1) is guilty of an offence.

Penalty: A fine not exceeding K10,000

Default Penalty: A fine not exceeding K500.00.

The original reasons for the fixing of freight rates in Papua New Guinea coastal shipping by law cannot be ascertained. Consumers in remote areas with inadequate means of cargo supply were probably thus to be protected from exploitation. However, the basis of the freight rate calculation poses the question of whether the relatively high freight rates best serve the interest of the customer.

The present freight-rate fixing system only leaves the shipper the choice, the freight rate being the same, between a shipping company offering a reliable service and a company with ships which, due to their size, standard of maintenance and reliability, are not competitive: the same freight rate obtains for good and bad service.

## 2.6 Future Trends

There is a growing desire among the coastal population to own and operate their own vessels. However the increased cost of building new vessels, coupled with the added complexity of operating a modern fleet on the coast of Papua New Guinea, is going to make it more difficult for individual National Groups to either replace vessels or start new shipping ventures.

There is no doubt that by joining forces, business groups will be able to obtain the necessary capital backing, allowing them to purchase vessels and necessary expertise to operate them. Large groupings would ensure sufficient cargo availability to make the venture viable.

The village level fleet will continue to be dominated by the small workboat and/or canoe capable of carrying a few bags of copra one way, and a few stores and drums of petrol in the other direction. The pattern has been set for the next few years in ship types for the feeder trades, i.e. medium sized dry cargo barges, as there is a modern fleet in operation at this time.

On the inter mainport there is a distinct split of ship type at the moment, those of the Government Line which concentrate more on the carriage of ISO twenty foot containers and those of the Consort Express Lines, which are geared for carrying pallets and small lifts.

There is no doubt that there is room for both methods of moving cargo on the coast. Any future replacements will have to have some form of dual capacity i.e. for lifting heavy lifts and catering for pallets. Shippers have their preferences, and a sensible mix must be catered for, whatever type of replacements are chosen.

ANNEX 1. gives a list of vessels currently registered in Papua New Guinea. These vessels operate mainly on the coastal trade.

### 3. SHIPPING POLICY AND REGULATIONS

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The Marine Division of the Department of Transport is responsible for the control, through implementation of the Merchant Shipping Act, of coastal shipping in the country, the Papua New Guinea ships involved in overseas trade, and for advising other Government Departments on all shipping matters.

#### 3.1 Objectives

The Division has four main objectives:

##### 1. Improved Safety of All Papua New Guinea Ships

On 1st January 1976 the Merchant Shipping Act was first introduced to regulate and control the safety aspects and fleet structure of the coastal shipping industry. The policy of the division is to develop a shipping industry and associated organisations in Papua New Guinea which satisfy the country's needs and are of a standard that is recognised internationally. The present Act which has been revamped periodically consists of the following parts:

- Safety
- Crewmen
- Wreck and Salvage
- Pollution
- Investigation and Casualties
- Coasting Trade
- Pilotage
- Navigational Aids

There is also in force an Act titled "Overseas Trade Act"

which is concerned with the administration of overseas trade.

Further legislation under consideration concerns Sea Carriage of Passengers, Arrest of Ships on the High Seas, and fishing vessels. The fishing industry is a large growth area and it is felt that due to the particular requirements of the industry, special legislation have to be drafted to regulate the safety of these vessels.

## 2. Improved Shipping Services Throughout Papua New Guinea

The Freight Study Bureau within the Marine Division monitors all information concerning the amount of cargo carried, both coastal and overseas, and freight rates charged. This information is used during freight rate negotiations and serves as the basis for the issue of coasting trade licences.

Over the past couple of years, policy has been aimed at up-dating the coastal fleet and encouraging scheduled services. To promote this policy, the Marine Division introduced a new licensing system in 1977. Ships are licenced for a period of time ( maximum 8 years licence for new ship ) dependent on their age, condition, suitability for coastal operation and ownership.

In the past there was an acute overtonnaging on the coast with too many vessels competing for insufficient cargoes. However, there has been considerable rationalisation in the industry and several old ships have been replaced by more modern and suitable ships. This has relieved the overtonnaging problem to a considerable degree. The Government's policy is to encourage nationals to own and operate their own workboats for transporting primary produce and trade goods to and from central collection points.

### 3 Extending Papua New Guinea Involvement in Overseas Shipping and Trade.

One of the primary objectives is to see a greater proportion of the country's exports carried in Papua New Guinea ships. Papua New Guinea in common with many other developing countries, exports primary produce and raw materials to a number of destinations world wide.

### 4. Training Papua New Guinea Citizens to Administer and Operate the Shipping Industry.

The training of seafarers, in order to supply the number of Certificated personnel, is undertaken by the Papua New Guinea Maritime College in Madang. The College is run by a Board which is appointed by the Minister for Transport. Membership of the Board comprises:

- a Department of Transport representative
- a Department of Education representative
- a Department of Labour representative
- two representatives from the shipping industry.

The Papua New Guinea Maritime College continues to concentrate its efforts on supplying qualified men for Papua New Guinea coastal shipping industry. Arrangements are continually being made with overseas shipping lines for training Papua New Guinea officers and seamen for Foreign Going Certificates of Competency. In addition to providing training for Papua New Guinea seafarers, the PNG Maritime College also serves as one of three Regional Training Institutions and Regional Examination Centres in the South Pacific for the purposes of meeting regional training needs under the South Pacific Uniform Maritime Standards Code (SPUMS). This is discussed in a later part

of this paper.

### 3.2. Coastal Shipping Regulations

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The laws governing the coastal shipping trade in Papua New Guinea are laid down in the Merchant Shipping (Coastal Trade) Act 1977 and the Merchant Shipping (Safety) Regulations 1976. They are based on established English and Australian shipping laws.

The following sectors of the Coastal Shipping Regulations are covered on account of their critical importance:

- Coasting Trade Committee
- Coasting Trade Licences

#### 3.2.1 Coasting Trade Committee

The Merchant Shipping (Coastal Trade) Act 1977 No.215 N,215 O,215 P,215 Q and No.24 (Regulations Pos. 1-7) of the 1977 Merchant Shipping (Committee of Advice) -Regulations- lay down the responsibilities and composition of the Coasting Trade Committee.

"Division 4 - Coasting Trade Committee.

" 215 N - Coasting Trade Committee.

There shall be a committee to be known as the Coasting Trade Committee.

" 215 O - Membership of Coasting Trade Committee

(1) The Coasting Trade Committee shall consist of-

(a) an officer of the Department of Transport who shall be the Chairman of the

Committee; and

- (b) two members to represent the interest of shippers or producers of goods customarily carried in ships engaged in the coasting trade; and
- (c) one member to represent consumers of goods customarily carried in ships engaged in the coasting trade; and
- (d) three members to represent the holders of coasting trade licences.

(2) The members of the Coasting Trade Committee shall be appointed by the Minister by notice published in the National Gazette.

" 215 P - Coasting Trade Committee Deemed To Be Committee Of Advice For Certain Purposes.

For the purposes of -

- (a) the conduct of its meetings, and
- (b) the payment of fees, expenses, .. and allowances to its members,

the Coasting Trades Committee is deemed to be a Committee of Advice.

" 215 Q - Functions of Coasting Trades Committee.

The Coasting Trade Committee may -

- (a) advise the Minister on any matter relating to the coastal trade; and
- (b) report to the Minister on any proposed Regulation relating to the coastal trade, and shall,
- (c) within 60 days of being requested by the Minister so to do, recommend a rate it considers to be the maximum rate that should be charged for a particular



shipping service.

Statutory Instrument No. 24 (Regulations  
Pos.1-7) of the 1977 Merchant Shipping  
(Committee of Advice) Regulations.

Merchant Shipping (Committee of Advice) Regulation 1977,  
being a Regulation, Made by the Head of State, and in  
accordance with the advice of the National Executive  
Council under the Merchant Shipping Act 1975.

1. Interpretation

In this Regulation, unless the context otherwise  
requires or some other meaning is clearly intended-  
"Committee" means a Committee of Advice under Part  
VIII of the Act.

2. Constitution of a Committee

A Committee shall consist of not less than three  
members.

3. Chairman Of a Committee

The Minister shall appoint one of the members of the  
Committee to be Chairman.

4. Quorum Of a Committee.

(1) Where a Committee consists of three members, all  
members are required to form a quorum at a meeting of the  
Committee.

(2) Where a Committee consists of more than three  
members, the Chairman and not less than half of the number  
of the other members are required to form a quorum at a  
meeting of the Committee.

5. Meeting Of a Committee.

Meetings of a Committee shall be held at such times as  
the Committee determines or as the Chairman directs.

6. Conduct Of Meetings Of A Committee

At a meeting of a Committee-

(a) all questions shall be decided by a majority of the votes of the members (other than the Chairman) present and voting, and

(b) where there is an equality of votes, the Chairman has a casting vote.

7. Fees, Expenses and Allowances Payable To Members.

(1) This section does not apply to the Chairman or a member of a Committee where that person is an employee of the state or of an authority or instrumentality of the state.

(2) The Chairman of a Committee shall be paid K30.00 for each day, or part of a day, on which he attends a meeting of the Committee.

(3) A member of a Committee (other than the Chairman) shall be paid K25.00 for each day, or part of a day, on which he attends a meeting of the Committee.

(4) Where a member of a Committee (including the Chairman of the Committee) attends at a meeting of the Committee held at a place other than that at which he resides, - he shall be entitled to-

(a) reimbursement of any expenses necessarily or reasonably incurred by him in travelling -

(i) from his place of residence to the place at which the meeting is held ;  
and

(ii) on completion of the meeting, from the place at which the meeting was held to his place of residence; and

(b) where he is necessarily absent from his normal place of residence he shall receive-

(i) the necessary and reasonable cost of travel, accommodation and meals; and

(ii) an incidental daily allowance of

### 3.2.2 Coastal Trade Licences

The application of the laws governing the granting of coastal trade licences is the object of considerable criticism in Papua New Guinea. These laws are laid down in the Merchant Shipping ( Coastal Trade ) Act 1977 Nos.215A - 215K and in the Merchant Shipping ( Coastal Trade ) Regulations 1978 ( No. 19 of 1978 ). The laws cover the following individual points:

- 215 A - Application
- 215 B - Coasting Trade Licences
- 215 C - Categories of Coasting Trade Licences
- 215 D - Requirements to hold Coasting Trade Licences
- 215 E - Limitation on grant of Licence
- 215 F - Duration of Licences
- 215 G - Delivery up of Licences in certain circumstances
- 215 H - Cancellation or variation of Licences
- 215 I - Holder to observe conditions of Licences
- 215 J - Requirement to furnish information
- 215 K - Exemption from requirement to hold Coasting Trade Licences

Within the framework of the above regulations the Coasting Trade Committee has to provide the Minister for Transport with recommendations. Independently of these recommendations, the Minister has the prerogative of granting the licences. The underlying purpose of the licensing regulations is to control the supply of coastal shipping tonnage in order to achieve an economic balance between the needs of the trade as a whole and the provision of shipping services to fulfil such needs.

### 3.2.3 Merchant Shipping (Safety) Regulations 1976

The Merchant Shipping (Safety) Regulations correspond in large measure to the Safety provisions already accepted in international shipping. In only a few points is a modification of these laws to be recommended; in contrast to most shipping nations, Papua New Guinea coastal shipping law does not require a Hull and Machinery Survey to be carried out by a recognised Classification Society. This task, together with all other requirements of the Merchant Shipping (Safety) Regulations 1976, is undertaken by the Marine Division of the Department of Transport.

#### 4. MARINE POLLUTION

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##### 4.1 International Conventions

Over the last 30 years, a series of international conventions have been developed which serve to help marine pollution. However, these conventions will only have effect when ratified and enforced by nations. The list of International Maritime Organization (IMO) conventions include:

###### 1. Operational Pollution Related

- .1969 Amendments.
- .1973 MARPOL - International Convention for Prevention of Pollution from Ships.
- .1978 MARPOL PROTOCOL.

###### 2. Accident and Safety Related

- .1960 SOLAS - International Convention for Safety of Life at Sea.
- .1960 COLREG - International Regulations for Preventing Collisions at Sea.
- .1966 Load Lines - International Convention on Load Lines.
- .1972 INTERVENTION - International Convention Relating to Intervention on the High Seas in Case of Oil Pollution Casualties.
- .1974 SOLAS.
- .1978 STCW - International Convention on Standards of Training, Certification and Watchkeeping.

### 3. Compensation and Liability Related

.1969 CIVIL LIABILITY - International Convention on Civil Liability from Oil Pollution Damage.

.1971 FUND - International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage.

The provisions of the 1969 amendments to the 1954 Convention are extremely important in that they require the equivalent of the load on top (LOT) tank washing and ballast water management system and limit oil discharge per mile. This discharge level is 1/75 of the amount of oil discharged by straight tank washing and discharge.

For a 200,000 ton tanker, this reduces the discharge of oil from 1,000 tons, or 7,000 barrels per voyage, to 26.7 tons, or 93.3 barrels per voyage.

The 1973 Convention and the 1978 Protocol go even further in limiting discharge to 1/30,000 of the cargo. The Conventions can be roughly divided into three areas :

- Conventions to limit chronic pollution discharges, such as ballast water and tank washing ;
- Conventions to increase safety and reduce accidents at sea ; and
- Conventions to compensate for oil spill clean-up costs and damages.

The second group of conventions aim at preventing tanker accidents, and the third group deal with compensation for clean-up costs and pollution damage.

#### 4.1.1 Oil Clean-Up Responsibilities

Following the Torrey Canyon spill in 1967, shipowners

created the TOVALOP (Tanker Owners Voluntary Agreement concerning Liability for Oil Pollution) Insurance System and the cargo owners created the CRISTAL (Contract Regarding an Interim Supplement to Tanker Liability for Oil Pollution) Insurance System. Compensation for oil pollution damage caused by tankers is based on two separate regimes ; one relies on international conventions established by IMO (CLC 1969 and FUND Convention 1971), the other is through voluntary agreements established by the tanker and oil industries. These two systems, although separate, look very much alike and follow the same basic pattern. They each consist of two layers of compensation: the first layer provided by shipowners through their third party liability insurers, the P&I Clubs, and the second layer provided by the oil cargo owners through central funds to which they contribute.

The applicability of the voluntary agreements/International Conventions for compensation is a complex arrangement, however a simplified description of each is presented as follows :

1. CLC - when persistent oil escapes from a laden tanker causing pollution damage to the territory of a state party to the CLC.
2. TOVALOP - when persistent oil from a tanker covered under TOVALOP, either threatens to cause or does cause pollution damage to the territory of a state where CLC does not apply.
3. CRISTAL - when persistent oil owned by a CRISTAL member and carried in a tanker covered under TOVALOP threatens to cause or does cause pollution damage to the territory of a state not party to the FUND Convention.
4. FUND - when persistent oil escapes from a laden tanker, causing pollution damage to the territory of a state party to the Fund Convention. To partake of the

benefits of the aforementioned conventions, governments must do the following :

1. Ratify the conventions, which only apply when the flag state of the ship and damaged State are both parties to the convention.

2. Pass national laws under which to have access to the benefits of the convention. Recovery of clean-up costs and third party damages are through the internal laws of the damaged state.

3. Be prepared to mount a "reasonable" clean-up effort.

4. Be prepared to determine accurately third party damages to fisheries, tourism and industry.

The government should also be aware that the maximum limits under the conventions are not adequate to cover all the costs incurred in a really large spill such as that of the AMOCO Cadiz, which spilled 220,000 metric tons of oil on the coast of France and generated damages ranging upward to ten times the limit provided by the CLC and CRISTAL programmes in force at the time of the spill.

It is, however, noted that these conventions and programmes pay only for "after the fact" costs of response and do not pay funds to governments for preparing to deal with spills.

#### 4.1.2 Civil Liability

Recognizing the need for a legal framework to deal with oil spills, the IMO in 1969 sponsored the adoption of



the International Convention on Civil Liability for Oil Pollution Damage, which represents a significant step in the development of legal remedies for persons or nations affected by oil spills. It standardized criteria of financial responsibility for pollution clean-up and damage liability within the international marine community.

The CLC covers pollution damage to a contracting State's territory or territorial seas resulting from a spill of persistent oil carried by seagoing vessels. The spill may have originated on the high seas, but only the resulting damage within the territorial waters is covered. Bunkers also are covered if the vessel was carrying oil cargo. The Convention places the primary responsibility for oil pollution damage on the shipowners. Vessels covered by the Convention must have proof on board that they are covered by insurance sufficient to meet the requirements of the Convention.

Under the Convention, injured parties may collect up to \$160 per ton of the ship's tonnage (defined as net tonnage plus tonnage of engine room space) with a maximum of \$16.8 million per incident for costs of loss due to oil pollution including clean-up costs. The Convention also provides for compensation for preventive measures, such as the use of skimmers or protection booms, which are taken to protect endangered coastlines and other resources.

There are some circumstances under which a shipowner is not liable for the costs of clean-up, damage or loss due to oil pollution under this convention. These include "acts of God", acts of war or hostility, negligence by governments (failure to maintain navigational aids), or actions of a third party with intent to damage (sabotage).

The injured party suffering damage or loss, or the

party incurring clean-up costs, makes a claim against the tanker owner. If the owner does not have a defense under the Convention, he may settle out of court with the claimant. Otherwise the claim is heard in the court of the contracting state where the damage occurred: liabilities of the owner are determined, and payment is made by the owner's insurers. If a shipowner is able to use one of the defenses, or if the costs exceed Civil Liability Convention limits, the injured party could then turn to the Fund Convention.

#### 4.1.3 Fund Convention

Due to the limitation in the compensation available to the damaged party under the Civil Liability Convention, another Convention was adopted under IMO in 1971. The International Convention on the Establishment of an International Fund for Compensation of Oil Pollution Damage created a fund financed by mandatory contributions from contracting States which receive oil shipped by sea. This convention applies only to those situations and vessels already covered by the CLC.

The Fund Convention more than doubles the maximum amount of compensation available under the CLC, from \$16.8 million to \$36 million per incident (1975 rates). The upper limit of the Fund Convention could be increased to \$75 million, if necessary, by decision of the governing body of the International Fund. Furthermore, a shipowner who is shown to be liable for costs over \$120 per ton or \$10 million, whichever is less, under the CLC will be able to apply to the Fund for reimbursement of the portion of his liability exceeding these figures, up to a maximum of \$160 per ton and \$16.8 million whichever is less. Thus the owner's insurer would be relieved of part of the bur-

den under the CLC.

#### 4.1.4 Other Resources

There are a large number of other resources available to assist in planning and response activities by governments. UNEP and IMO have in many cases provided consultants and advisers to help governments with regard to oil pollution problems.

A wide variety of resources are utilised in a given spill control situation. For small spills of a few barrels, local industry resources may be sufficient to handle the situation. However, as spill size and complexity increase, successively higher levels of supplemental resources are needed both for the clean-up operation and to document the spill situation, the response to the spill situation, and the impact of the spill. This hierarchy normally goes from local and/or co-operative industry resources through contractor resources to governmental resources as the spill size and complexity increase, unless national governments pre-empt the process and take over the response at some stage.

As the spill size and complexity increase, the administrative role often shifts from that of actual hands-on clean-up response to a more managerial role of obtaining outside resources; monitoring both performance and cost of contractors, consultants and suppliers; ensuring that adequate engineering and scientific input is included in the clean-up decision process; and ensuring that adequate documentation for reimbursement and future litigation is achieved.

Consultants, either from consulting organizations or from academia, can play an important role in the spill response and the activities thereafter. Consultants can

play three major roles during the period of the spill. The first is to provide input in the form of oceanography, meteorology, and environmental systems characteristics which are necessary inputs for the response activity. Secondly, they can provide technical information with regard to clean-up technology, sources of supply, and knowledge of effective spill equipment and supplies under different circumstances. Finally, the consultants can carry a major role in documenting the spill and clean-up operation.

#### 4.2 Pollution Control Options

There are several options that nations can follow in dealing with oil pollution. They range from a "do-nothing" approach, which allows spills to occur without control or clean-up, to highly sophisticated and costly programmes with large numbers of persons assigned specifically to oil pollution control. With the former, the environment almost always suffers because there is no incentive to minimize pollution, whereas the latter competes for funds needed by other programmes in the nation. Most nations choose a path between the two extremes, which provides a reasonable degree of protection for its environmental systems while discouraging damaging discharges through prevention programmes, contingency planning, and reasonable clean-up activities and charges. Several basic options are discussed in the following sections.

##### 4.2.1 Organizational Structure : Within a Country

Several alternative organizational structures are possible within a country depending on the desires of the national government and its interaction with private

enterprise in the form of oil production, refining and shipping organizations. In a country that has a large, strong private sector capable of executing preventive clean-up measures, the government has the alternative of acting in a regulating, supervising and enforcing role to ensure that private industry organizes and builds up a capable response programme. In countries where oil production, refining and shipping interests are not strong, - where these entities are nationalized industries or where pollution is likely from passing ships or nearby foreign production facilities - it may be necessary for the national government to play a more active role.

In some cases it is possible to combine governmental and industrial efforts into a unified programme. The use of co-operative programmes, where industries or industries and government agencies agree to pool resources to manage the response effort, have been effective in several countries. It is necessary for the national government to evaluate carefully its situation and to purposefully design the appropriate arrangement for its country.

#### 4.2.2 Organisational Structure : Regional

Similar choices exist in the regional arena. The role of pollution prevention and control may be left to industry either with or without governmental control or participation. The industrial response may either be on the part of each producing, refining or shipping company, or the industries may organize a regional oil spill co-operative. A noticeable example of a regional co-operative is the Clean Caribbean Co-operative, which is an organization of most of the companies and governments which ship oil to, from, or within the Caribbean Sea area.

Wherever government chooses to exercise leadership

in a regional arena, considerable benefits can accrue as a result of co-operation in the area. The regional concept can pool technical expertise, build common stockpiles of supplies and equipment, economize on training activities, thus benefitting participating countries. Dual regional participation by both government and industry is possible when the nature of government and industry so permits.

#### 4.3 Financing Pollution Response

A major issue in oil pollution response is the appropriate expenditure of funds prior to the spill to purchase and stockpile equipment for training and for contingency planning, as opposed to paying for response only after the spill occurs. Significantly, major compensation programmes like TOVALOP, CRISTAL, the CLC, and the Fund Convention schemes pay only after the spill. The cost of developing the response organization and its capability is expected to be borne by the governments and industries.

Thus, governments should understand that they either must use their own resources, or outside assistance, if available, and perhaps permit requirements, standards and equipment pool charges to build their response programme. The Japanese use of requirements for pollution control equipment on ships in their waters or the alternative payment of a stockpiling fee is a noteworthy example to be explored.

Once the response capability has been established, the government can look to the spiller and insurance programmes for compensation for clean-up to prescribed limits when the spiller is known and/or covered. When the spiller is unknown, not covered by insurance, or when the liability limits are exceeded, a government again must

turn to its own resources to finance a response.

#### 4.4 Prevention Plan Cycle

The most cost-effective programme for a nation which cannot afford costly oil spill clean-up response is directed towards preventing the spills from occurring. Figure 2. shows a classical prevention plan diagram that emphasises design, operating procedures, training, supervision and enforcement as the key elements. Both national laws and international conventions may follow the steps shown in developing an effective prevention programme. By supporting the international conventions through ratification, enforcement, and the creation of parallel national laws, an effective prevention programme may be initiated.

#### 4.5 Contingency Planning Cycle

A key part of oil spill control is documented by the contingency planning process shown in Figure 3. Much of the planning as it is carried out today stops with the development of the administrative contingency plan which may be as simple as a list of agencies called together to handle a programme. It is stressed that the completion of the entire contingency process is essential for a well planned programme.

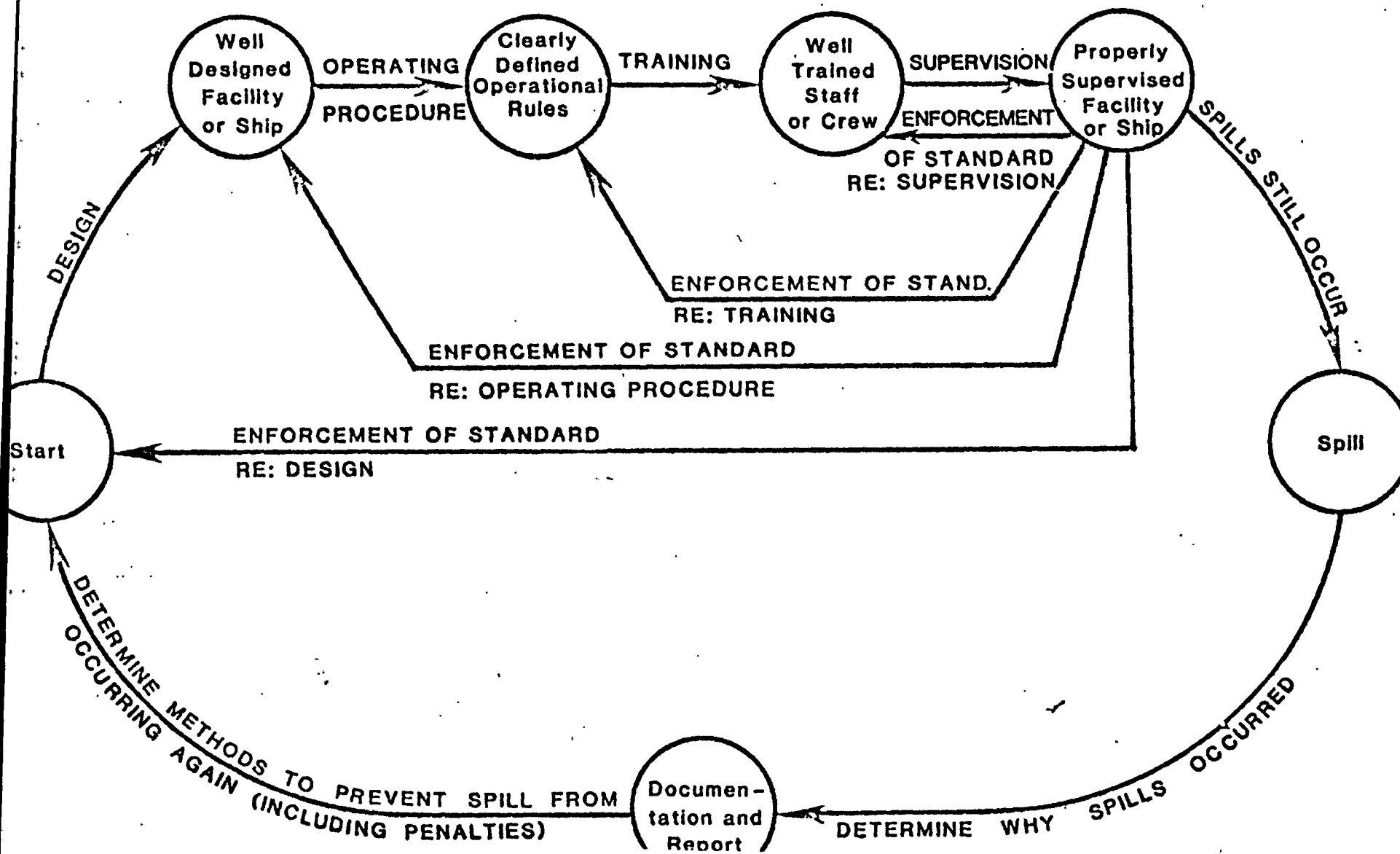
ANNEX 2. gives the sub-components of the Contingency Planning Process.

#### 4.6 Regional Programmes and Centres

Considerable discussions have been addressed toward the concept of regional programmes. The concept of a regional centre or centres to co-ordinate regional acti-

FIG. 2

# PREVENTION PLAN CYCLE

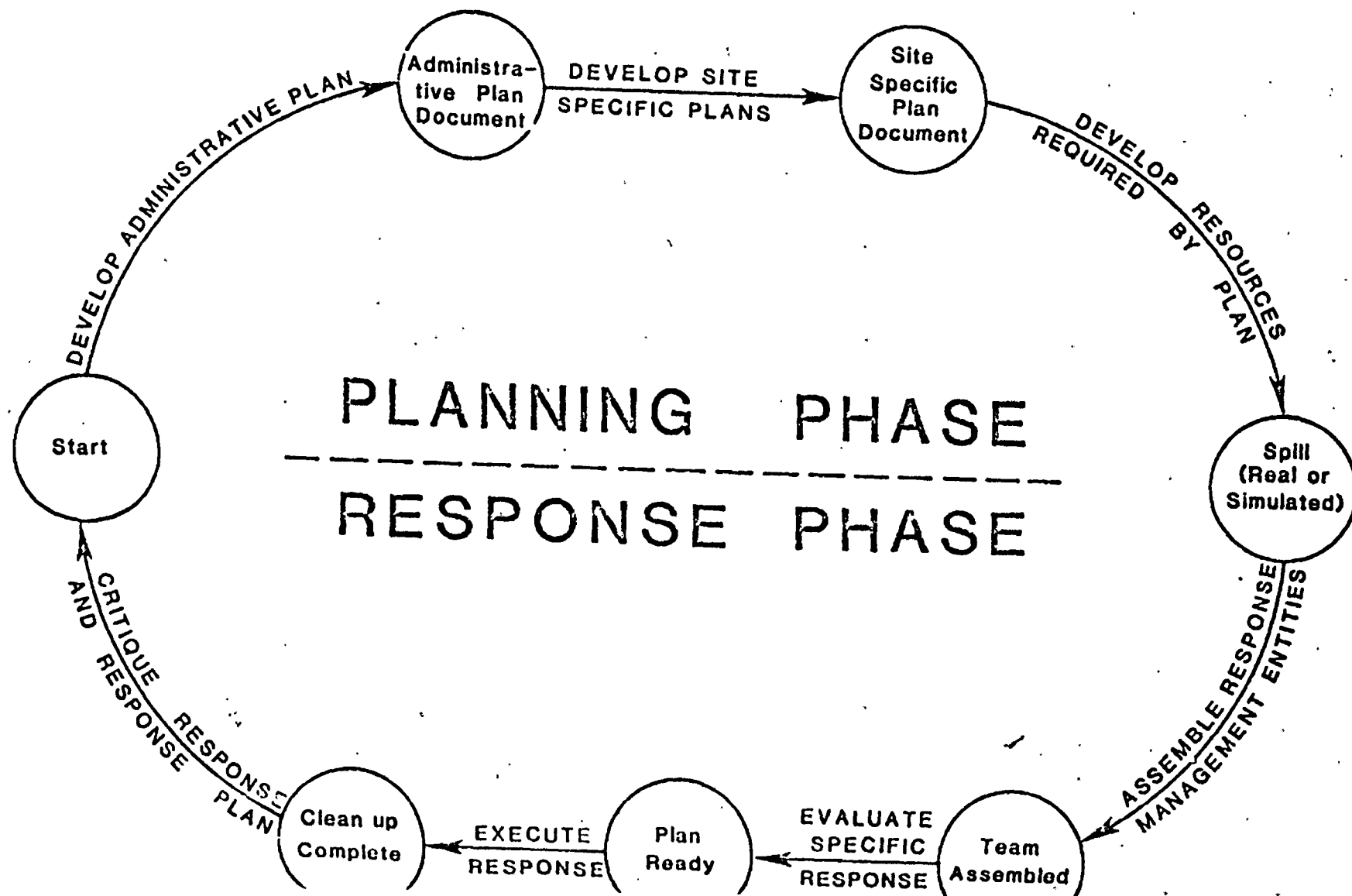


Source: UNEP Regional Seas Report and Studies No.4  
 "The Status of Oil Pollution and Oil Pollution Control in the West and Central African Region" 1982



FIG. 3

# CONTINGENCY PLANNING CYCLE



Source: UNEP Regional Seas Report and Studies No. 4  
"The Status of Oil Pollution and Oil Pollution Control in the West  
and Central African Region" 1982

vities and to administer selected components is often advanced. In this case it is suggested that appropriate activities of the centre(s) would include but not limited to the following :

1. The stimulation and development of programmes relating to oil spill prevention and control in the nations and the region.

2. Documenting occurrences of spills and response activities.

3. Serving as a communications centre to advise of international spills and to facilitate outside support for response.

4. Training programme leaders for prevention and response organizations in member countries.

5. Training workers to be involved in actual response to spills.

6. Arranging outside training in oil spill programme management for those capable of obtaining it outside the region.

7. Evaluating the appropriate oil spill control technology for the region.

8. Developing model oil spill legislation and promoting its adoption.

9. Developing model site-specific and administrative oil spill control contingency plans as examples to be used in plan development and training.

10. Assisting in the development of administrative and site-specific contingency plans for member countries.

11. Providing technical assistance in the form of consultation and training in the event of major spills.

12. Maintaining lists of worldwide suppliers, contractors and consultants available to help in spill response.

13. Assisting in the arrangements for the stockpiling of supplies or equipment to be acquired on a regional

basis.

14. Arranging for the maintenance of regional supplies and equipment.

15. Promoting the development of laws to facilitate entry of pollution control equipment and supplies into countries affected by spills.

16. Arranging for the transportation of regionally stockpiled equipment to a spill scene.

17. Examining and recommending methods of funding for regional capabilities and national programmes.

#### 4.7 South Pacific Regional Environmental Policies

Under the 1947 Canberra Agreement which sets out the legal framework for the South Pacific Commission (SPC), the SPC has a broad mandate to carry out regional action plans for various economic and social policies, "in matters affecting the economic and social development of the territories within the scope of the commission and the welfare and advancement of their peoples" (SPC, 1980). Under this broad umbrella, concern for environmental protection and conservation of the natural resources of the Pacific has been voiced over a period of more than a decade. Although Pacific traditional culture, through taboos, sanctions and myths, encourages the conservation of natural resources and protection for the natural environment, the past decade has seen a growing environmental awareness within the region. Increases in population, industry and development; the testing of nuclear devices; and the proposed use of the Pacific region as a dumping ground for nuclear wastes have shown that a united and concerted effort on a regional scale is necessary to protect not only the present but also the future resources and destiny of the people to whom the Pacific is "home".

Since the inception of the SPC and the first conference held in Suva, Fiji in 1950, much has been done to provide economic development and social welfare in the South Pacific region and the SPC has undoubtedly been progressive in accomodating the aspirations of the islands as each territory since 1962 has acquired independence. The working programme of the SPC has increased from a budget of 40,000 pounds sterling in 1948 to about \$3 million in 1983.

The Conference on Human Environment in 1982 brought action responding to the concerns of the Pacific Islanders. One of the resolutions passed at the Conference was that :

"Each country and territory of the region should be requested to accede to the London Dumping Convention (LDC). A regional meeting should be held, preferably before the end of 1982 so that these countries and territories can prepare a common regional agreement. This would enable them to invoke the provisions of Article VIII of the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters (also known as the London Dumping Convention - LDC) and thus ensure that the regulatory framework of the Convention incorporates the prohibition on storage and disposal which has been adopted as a policy of the South Pacific Regional Environment Programme (SPREP)" (SPREP, 1982).

As a result of the resolutions, the Convention on the Protection and Development of the Natural Resources and Environment of the South Pacific Region, and two protocols namely, the Protocol for the Prevention of Pollution of the South Pacific Region by Dumping ; and the Protocol for the Co-operation in Combating Oil Pollution Emergencies in the South Pacific Region, embodying the resolu-

tions passed at the 1982 Human Environment Conference, were drafted to invoke Article VIII of the LDC which states :

"Contracting parties with common interests to protect in the marine environment in a given geographical area, shall endeavour, taking into account characteristic regional features, to enter into regional agreements consistent with this Convention for the prevention of pollution; especially by dumping" (LDC, 1972).

The draft Convention is not limited to pollution control. It includes the general principles of resource development and management in order to reflect the regional policy statement of the Rarotonga Conference which includes :

"Integrated environmental, economic, social and resource planning and management is essential to ensure sustainable rational use of the land and sea resources of the region and the greatest enhancement of human well-being"; and :

"Appropriate and enforceable legal instruments and institutional arrangements are necessary basis for effective integration of environmental concern with the whole of the development process" (SPREP, 1982).

It was pointed out at the second South Pacific regional meeting to discuss the Convention and Protocols (Noumea, November 1983), that resource development and management should not be included in an anti-pollution Convention as this goes beyond the obligation to prevent and control pollution. However, the inclusion of these concepts in the Convention is not only in keeping with other regional and international Conventions, but is also

in keeping with regional policy in the Pacific. Although obligations to prevent and control pollution are common in other regional Conventions such as the Abidjan, Barcelona and Kuwait Conventions, the Abidjan and Caribbean Conventions also include the principles of environmental management within the scope of the Convention to reflect the broad framework of their regional Action Plans.

#### 4.8 Legal Protective Measures

##### 4.8.1 Regional Convention

The draft Convention on the Protection and development of the National Resources and Environment of the South Pacific Region broadly makes provisions for preventing, reducing and controlling pollution from : ships, land based sources, seabed activities, radioactive wastes, nuclear testing, dumping and atmospheric sources and make provision to prevent, reduce and control damage caused by mining and coastal erosion. Because of the unique nature of the Pacific Islands, the Convention makes provision for appropriate measures to be taken to protect and preserve rare and fragile ecosystems as well as the habitat of depleted flora and fauna. Provision is made for co-operative efforts for combating pollution in cases of emergency and imposes a duty to develop and promote contingency plans and a duty to notify other countries if they are likely to be affected by pollution. This follows the policy requirements as stated in Declaration 11 "for the

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development of national and regional contingency plans and prevention programmes". The Convention further creates a general duty of co-operation amongst the contracting parties and other organizations to share and exchange scientific and technological data and other

information and to develop research programmes. This is in keeping with the policy stated in Declaration 12"re-  
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quiring the further development of regional co-operation as an effective means of helping the countries and territories of the South Pacific to maintain and improve their shared environment".

#### 4.8.2 Protocols

The draft Protocols for the Prevention of Pollution of the South Pacific Region by Dumping and the draft Protocol Concerning Co-operation in Combating Oil Pollution Emergencies in the South Pacific Region had a "first reading" during the regional meeting in November 1983. The two draft Protocols give detailed treatment to regional policy articulated at the 1982 Human Environment Conference, which declared :

"The storage and release of nuclear wastes in the Pacific regional environment shall be prevented" (Declaration 9),  
and :

"The rate and nature of discharges of non-nuclear wastes shall not exceed the capacity of the environment to absorb them without harm to the environment and to the people who live from it" (Declaration 8).

The draft Protocol on Oil Pollution Emergencies for the Pacific follows a global pattern and is similar to those of the Kuwait, Abidjan, Barcelona and Caribbean Protocols on Oil Pollution, but the draft Protocol, having had the benefit of the experiences in other regions of the world, has been broadened to cover other pollutants.

#### 4.8.3 Forum Fisheries Agency

The Convention establishing the South Pacific Fisheries Agency in 1977 culminates the common interest in the Pacific for the conservation and optimum utilization of the living marine resources and particularly those of highly migratory species. Co-operation and co-ordination of fisheries policies at a regional level has become a necessity as it is only at this level that the exchange of information about living marine resources and especially those of highly migratory species can bring about the maximum benefits for the people and the region as a whole.

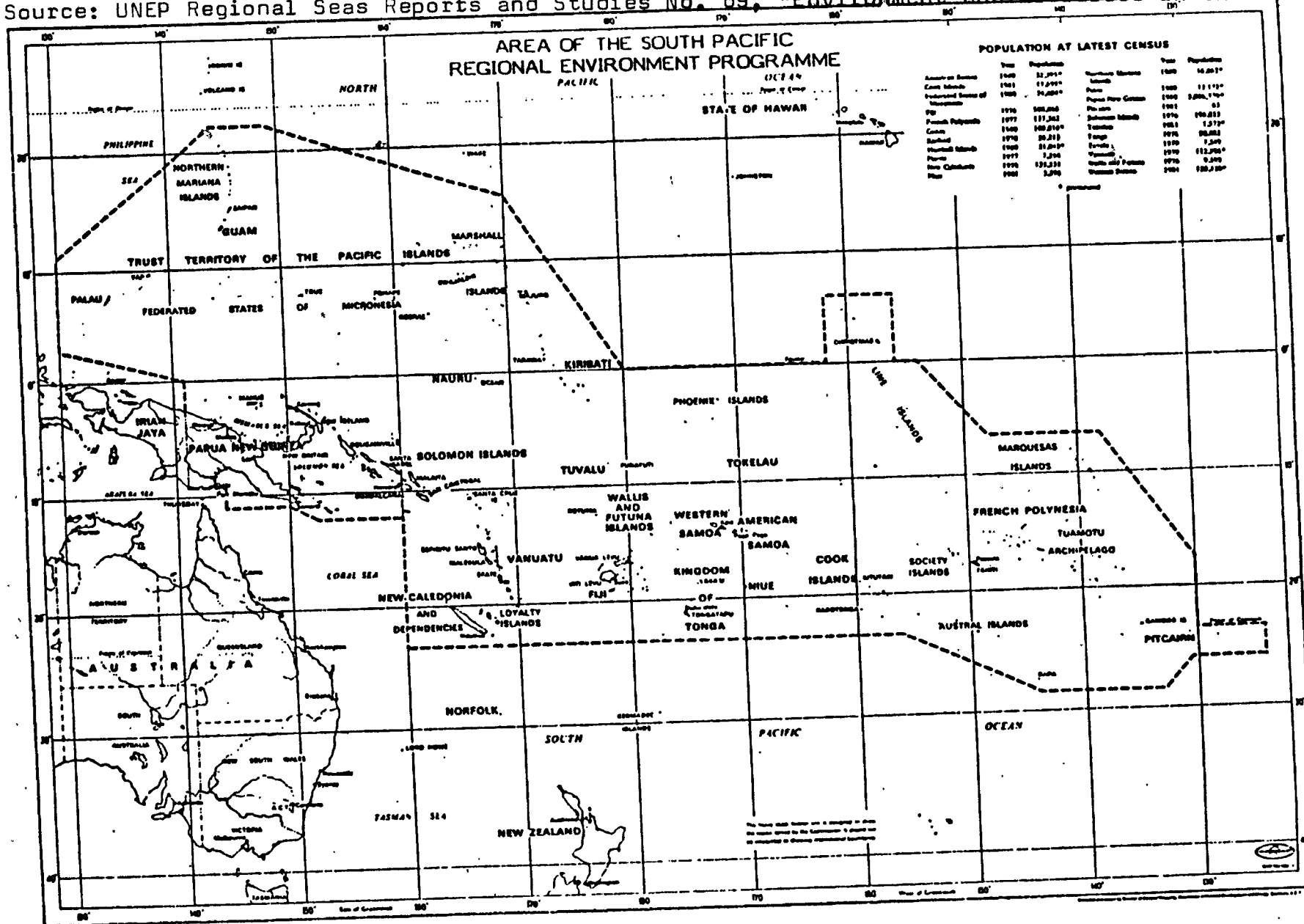
#### Conclusion

The three regional Conventions and the two Protocols are indicative of the trends emphasizing the number of environmental concerns affecting the Pacific Region and its people. Some of the provisions such as those prohibiting nuclear testing and dumping, and the geographic area the Convention seeks to cover, have wide political ramifications and have yet to be agreed upon. The changes sought and required by the Conventions and Protocols have been the result of wide consultation and research at national and regional levels. The Conventions are not only clear acknowledgement of the policy decisions made to protect the Pacific environment but are also in keeping with trends in other parts of the world. The area of the South Pacific Regional Environment Programme is shown in FIGURE 4.



FIG.4

Source: UNEP Regional Seas Reports and Studies No. 69, "Environment and Resources in the Pacific"



#### 4.9 Papua New Guinea Marine Anti-Pollution Plan

The Marine Division of the Department of Transport is responsible for oil pollution control in Papua New Guinea. Formulating a Marine Anti-Pollution Plan was an area that received attention in the past few years. This culminated in a conference in January 1980, attended by representatives of :

1. Marine Division (Department of Transport)
2. Papua New Guinea Harbours Board
3. Office of Environment
4. Fisheries Department
5. Papua New Guinea Defence Force
6. Representatives of Shell and Mobil Oil as the Oil Industry's representatives
7. The National Emergency Services

This conference purpose was to collect information about the resources and facilities available to each body for consideration in the Papua New Guinea Anti-Pollution Plan formulation.

The Marine Division purchased Anti-Pollution gear. Full sets of offshore and inshore equipment were allocated to Port Moresby, Alotau, Lae, Rabaul and Madang. One set of inshore gear was allocated to Kieta. The dispersant chemical for dissolving oil slicks was purchased by the Papua New Guinea Harbours Board and kept under their custody. The bulk of the dispersant is kept in Port Moresby and Lae while operational quantities are kept in other ports.

At the kind invitation of the Papua New Guinea Government, a Seminar on Marine Pollution Prevention, Control and Response was held in Port Moresby from 19-23 April, 1982. The Seminar was jointly sponsored by the

Department of Transport and the International Maritime Organisation (IMO) with financial assistance provided by the Swedish International Development Authority (SIDA) and the United Nations Development Programme (UNDP).

## 5. NATIONAL GOVERNMENT PARTICIPATION IN SHIPPING

### 5.1 Papua New Guinea Shipping Corporation

The Government, through the Papua New Guinea Shipping Corporation, entered overseas shipping in 1977 when they joined the Chief Container Service, on the Papua New Guinea/Australia run. It was about the same time that the Government also decided to enter the coastal shipping trades, by purchasing a then mainport operator, Mainport Cargoes Pty. Ltd; with the aim of revitalising the Papua New Guinea shipping industry. Transport in Papua New Guinea was to be improved by larger, more efficient ships, a reliable timetabled service and better co-ordination of sea and coastal shipping. While the Papua New Guinea Shipping Corporation gave the country's shipping a valuable stimulus, it itself was not able to realise the objectives envisaged. Through misplanning and mismanagement, the Company became financially unsound and was put into receivership, which made a policy reorientation necessary. It is not the intention here to become involved in the argument of who operates the best type of vessels in Papua New Guinea, but to comment briefly on the Government's participation in coastal shipping and whether or not they should continue to do so.

Generally, when a new emergent nation decides to become a shipowner and operator, it does so for any or all of the following reasons:

- establish a fleet to serve essential overseas trade ;
- save foreign exchange ;-
- counter possible discriminating practices by joi-

ning conferences on overseas trade.

All the above apply to National Shipping Lines entering overseas trades. Apart from providing employment for national seafarers, none of the above can really be said to apply to competing in coastal shipping.

There have been arguments put forward that the Government should have invested indirectly in coastal shipping operations by assisting with the setting up of smaller national companies, all around the country, thus ensuring an even spread of investment in Papua New Guinea. This has been done to a certain extent by Government policy of transferring the Government Fleet to Provincial Governments and village groups, as well as some shipping companies which have entered into joint venture arrangements with village groups. Such encouragement and assistance both by Government and private shipping companies is a big step towards fulfilling one of the Government's aims of equal opportunities and participation in the national economy by Papua New Guineans.

The Government Line competes on the mainport trades and, as such, has one major and two minor competitors. If the company competes favourably without Government subsidy, then its presence should be welcomed by other operators. However, with a freight tariff indicating maximum rates for coastal operations, normal commercial companies would be at a disadvantage if the Government Line was able to operate at a profit in marginal or unprofitable trades. We would therefore experience unfair competition and a breakdown of the coastal trade would result.

For a long time now the Government has been very indecisive on its policy of whether it should nationalise the industry or sell its coastal shipping operations to

the existing shipping companies/operators. Whatever the Government policy decision is, it should be stated now so that competitors understand their position, and do not risk over-investment in what is already a highly competitive industry.

## 5.2 The Need For a National Shipping Line

But what of overseas shipping and trade in Papua New Guinea? It is the intention here to open up discussion on the need (or not) for a national shipping line by outlining some basic principles.

While a country's merchandise accounts might be in surplus, it is not uncommon that its invisibles account might always be in deficit. The existence of this invisible account in the balance of payments is basically the services account, the main components of which in an export oriented economy is the payment of freight and insurance. Hence the shipping sector offers a major field for positive Government action to contain the outflow in the invisible account and to promote the establishment of efficient national shipping services. Nevertheless, it must be remembered that Government action will only bear fruit if the competitive advantage in providing shipping services and the net foreign exchange generated can justify the investment. These two conditions imply that national shipping lines should be highly efficient in providing the services that merchants require without relying unduly on Government protection, a certain degree of which is indeed necessary in the competitive world of shipping. The fundamental factor in the foundation of a nation's economic health lies in facilitating the movement of her commodities and the type and degree of protection on shipping should not disrupt this flow to the extent of a loss

in foreign exchange generated by trade.(1)

Many developing countries over the years have failed to realise their aspirations to build up their merchant fleet simply because they have failed to take cognizance of the fact that shipping requires a basic infrastructure to support its orderly development e.g. there must be proper enactment of maritime laws to establish a proper national shipping registry in regard to ships' registration as well as provisions for ship's mortgages to be legally binding, the international conventions which must be recognised in regard to safety of life at sea and the conventions which must be accepted in the proper day to day conduct of this highly competitive service industry. Frequently, these fundamental issues are swept aside and are replaced by a single issue which is steep in political overtones and that regardless developing nations must engage in shipping. This philosophy, which might be considered noble by some countries, is lacking in forthright economic consideration and in extreme cases simply flouts fundamental business principles. There is no guarantee of profitability in shipping and success can only be ascertained by facts of life economic results.(2)

### 5.3 The Policy To Be Advocated

Each developing country differs from the other in their circumstances which would make some developing countries in a more compromising situation in the long run to specialise in maritime transport. Such countries in their early stages would face a highly competitive market, that unless a sort of assistance is given to their fleets, they would not be able to succeed in that industry in their infant years. These advantageous factors, with the external activities this industry generates, would advoca-

## 5. Industrialisation

### 5.4 Types of Shipping Options

There are a number of factors which need careful consideration in decisions about shipping investments. These include:

- (a) the increasingly capital-intensive nature of many types of shipping;
- (b) the particular riskiness of some sections of the industry;
- (c) the existence in some cases of viable alternatives to transporting by owned vessels;
- (d) the existence of open registry shipping and the fact that some developed countries directly or indirectly subsidise their shipping industries.

A range of options is available to a country concerned with the maritime transport of its foreign trade. At one extreme it can buy imports on a c.i.f. basis and sell on f.o.b. basis, thus, in theory, leaving all the international shipping arrangements to the trading partner and giving up any control or influence over these arrangements and their costs. The other extreme is to build up a national flag fleet with the capacity to carry most of the country's foreign trade as well as to participate in cross-trades between third countries. These options are summarized as follows:

#### No Shipping Capability

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- (a) No control of ships (buy c.i.f. sell f.o.b.)
- (b) Use of freight brokers or shipping agents with control over shipping arrangements, but not rates.



(c) Shippers councils or similar organisations with control over shipping arrangements and some control or influence over rates.

#### National Shipping Capability

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(d) Using chartered or leased tonnage.

Owned Tonnage:

(e) For use in country's foreign trade.

(f) For use in country's foreign trade and also in cross trading.

#### 5.5 Joint Ventures

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Papua New Guinea like many developing countries is still lacking in shipping know-how and for a long time yet will continue to rely on foreign expertise and capital to conduct its shipping business. It is the intention of this part of the paper to provide some basic principles which may serve as a check list and hopefully create some understanding among people in government, shipping industry and those who have entered into or are considering going into joint ventures in shipping.

Survival in the modern shipping industry is to do with sharing the good times and the bad: it is to do with joint ventures.

The modern shipping industry, together with its users, suppliers and political masters, has developed certain characteristics which have forced all owners to review their traditional ways of doing business. In global terms, the shipping industry:

- is highly international : Anyone who thinks and acts nationally will soon be out of business, and this applies as much to the developing fleets as it does to

the more traditional owners;

- serves "planet earth": Ships will always be required to serve international trade and those which get the cargoes will be those whose owners have got their timing right, grasped the new technologies, employed the most cost effective crews, developed effective marketing strategies, and have established appropriate political links;

- is threatened by surplus shipbuilding capacity coupled with cheap yard credits: There are few difficulties in getting the ships or even finance, the real difficulty is getting cargoes at the right freight rates;

- is highly susceptible to national and international politics: The aspirations of national Governments and international bodies can neither be ignored or denied. Developing countries produce most of the world's raw materials and the future survival of traditional bulk carrier companies depends on their entering into joint ventures with third world exporters and fleets on a truly sharing basis;

- is highly capital intensive and of great interest to the financial institutions who, after noting the high profits made by their clients in the early 1970's and after facing losses and loan reschedulings in the 1980s, now need to participate on an equity basis;

- is only one link in the through transportation chain: Imaginative deals, now crucial for survival, depend on owners viewing their ships as only one link in the transport chain from supplier to consumer.

This list of characteristics is by no means exhaustive but it points to the increasing need for collaboration between shipping companies themselves, cargo owners, banks and governments. The days when owners could

operate their ships in isolation from the other parties have disappeared, probably for all time. It is essential for all owners to understand the features of joint ventures which lead to success or disaster.

Some people might argue that shipowners have been engaged in a form of joint venture whenever they have chartered their ships out. This is not the case for, by definition, a joint venture is an agreement under which all parties stand to gain and, more importantly, stand to lose from the venture. This definition focuses attention on the importance of the legal contract drawn up between the partners for their own protection and for the protection of other owners who may charter out their ships to the joint venture as a legal entity.

#### 5.5.1 Types of Joint Ventures

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There are many types of joint ventures which, in the liner trades, include: conference agreements; joint scheduling; sharing ship costs; sharing cargo and freight earnings; slot/space exchanges; etc. In the bulk trades they include: one company designing and chartering ships owned by others; international consortia where the consortium secretariat fixes the charters; a shipowner, cargo owner and bank as equity partners in a new company which charts the owner-partner's ships; etc. Each joint venture is a unique arrangement and the partners face unique problems.

#### 5.5.2 Reasons For Entering Joint Ventures

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The most crucial feature for both partners and customers to understand is the real reason why each partner entered into the joint venture. Many superficial rea-

sons are often given including:

1. A rescue operation by one or two companies trying to save a third, maybe to retain conference membership or to uphold a charter agreement.

2. Helping a developing country to establish its own national fleet.

3. Creating a large financial base and spreading entrepreneurial risk.

4. Strengthening the partners' negotiating position to obtain large contracts of affreightment.

Underlying all the variously quoted reasons, there are three main reasons why established owners enter into joint ventures:

- To get employment for their ships, either cargoes or charters.

- To sell their ships.

- To tap the fiscal, taxation and labour advantages available in another country.

Equally, the real reasons why developing countries enter into joint ventures with experienced shipping companies can be subsumed under one or more of the following reasons:

- Economic: to share in the potential profits from sea transportation when selling their exports on a c & f basis; to participate in conference rate setting; or to acquire ships cheaply.

- Social: to gain national managerial expertise in the operation of ships at a faster rate than if they started their own shipping service initially by themselves.

Unfortunately, in some developing countries, political

and social reasons interact and political appointees to the joint venture may not be the most appropriate people to be trained in shipping management.

### 5.5.3 The Problems in Joint Ventures

An analysis of the problems encountered by very many joint ventures reveals that they fall into identifiable causal categories. An understanding of these causal factors helps both the partners and their clients.

- Unequal size: a larger partner tends to dominate the smaller.

- Differences in financial strength and price of borrowing: a partner who is financially strong, has a good trade record with his bank(s) and can borrow cheaply may wish to take risks which are unacceptable to his financially weaker partners.

- Previous membership of other joint ventures: a company which has never previously been in a joint venture will be very cautious and behave with uncertainty while an experienced company will know exactly what to guard against.

- Cultural, language and nationalistic differences: these can be important sources of potential problems unless they are clearly understood and appreciated by the partners at the outset.

- Differences in the organisational "style" of each partner: this factor is often underestimated by partners yet has led to severe problems, with financial losses. Problems arise when a highly "organismic" company (i.e. a decentralised company in which real authority has been delegated downwards to middle managers) tries to operate a joint venture with a highly centralised company in which decisions are taken only by the chief executive.

This is related to the next causal factor.

- Differences in objectives: severe problems and misunderstandings arise when one partner is aiming at profit making, economic objectives while the other is driven to satisfy political goals.

- Unclear and "hidden" objectives: problems arise when one partner does not understand (or in many cases) chooses to ignore the real reasons why his partner(s) have entered the joint venture.

- Under-capitalisation and lack of financial support: too many joint ventures have been put together in a spirit of euphoria with the partners convinced that profits are going to be made and with insufficient attention being paid to meeting losses.

- Conflicting criteria used by the partners for measuring success: in a mining house/shipping company joint venture the mining house may feel it is paying too much for the sea transportation of its exports while the shipowner may feel satisfied with its earnings; or, in a trucking company/shipping company joint venture, the trucking company may feel satisfied with the turnaround of its trucks while the shipping company may feel aggrieved with delays to its ships. It is essential that partners in a multi-modal joint venture understand the criteria being used by each partner and that an appropriate auditing system is installed.

- Faulty decision making mechanisms: in too many joint ventures, set up by chief executives too little attention has been given to the methods of resolving day-to-day problems as well as the more fundamental problems.

- Controlling the external activities of partners: this is the most delicate of all the causal factors of problems and the most difficult to handle. One partner

may enter into a joint venture with all the financial strength and commitment that could possibly be asked for yet later, and outside the joint venture, he may enter into other deals that sap his financial strength and commitment to the joint venture. While a legally binding contract may control the activities of commercial partners, there is no way of controlling the activities of a national partner under the control of elected politicians.

- Changes in exchange rates and changes in profit/investment repatriation rules: a joint venture that may have been attractive to one partner under one set of rules may suddenly become unattractive should these change. In the joint venture contract, provision needs to be made for the disaffected partner to be controlled or relieved of his membership.

- Differences in socio-economic pressures to maximise or minimise employment: problems arise in multi-national joint ventures when one partner is under political pressure to maximise the employment of sea and shore staff while the other partner is under economic pressures to reduce employment. The solution lies in agreeing on total costs.

#### 5.5.4 Legal And Financial Aspects

Lawyers invited to draw up contracts for joint ventures and bankers approached to finance them are well aware of the problems but, in addition, the bankers will check:

- (a) The financial viability of the project.
- (b) The track record of the joint venture (if any).
- (c) The clarity of objectives of the joint venture.
- (d) The ownership split of the joint venture.

- (e) The relative strengths and weaknesses of each partner and what they bring to the joint venture.
- (f) The demarcation of responsibilities between the partners and the agreed mechanism for making decisions and resolving disputes.

Participation in joint ventures, whether with other shipowners, cargo owners, banks or governments is one way in which present shipping companies will be able to survive.

(1) Eu Leslie, "Development And Operation Of A National Shipping Line". (unpublished document)  
Port Moresby, 1983.

(2) *ibid.*

(3) World Bank Staff Working Paper No. 502

"The Developing Countries And International Shipping"  
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1981.



## 6. SHIPPERS COUNCILS

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### 6.1 Why Form A Council?

The prime purpose of a shippers' council is to unite shippers and to give them the necessary bargaining strength to obtain adequate and efficient services at the minimum cost - whether in the liner or in the non-liner sectors of shipping. The need for a council is likely to be greatest among shippers who are currently utilising liner services, because liner operators already wield considerable power through their liner conferences, and some comparable organisation is needed on the side of the shippers if a more equal balance of power is to be achieved. Shippers who use charter and contract shipping do not have the same need for an organisation, because these services are normally arranged in open market conditions, and individual shippers stand on a reasonably equal footing with shipowners by virtue of the cargoes which they control. Nevertheless, in seeking the most economical methods of transport shippers should not regard themselves as irrevocably tied to one sector of shipping, and for this reason a council must concern itself with entire range of shipping services. There is, however, another purpose in setting up a shippers' council which is also important: that of providing shipowners, government agencies and port authorities with a means of communicating with shippers, and of obtaining an authoritative shipper viewpoint. The need for shipper spokesmen has become pressing in today's situation, because there is a need for a high degree of co-ordination between all parties in order to adapt traditional shipping procedures and practices to modern-day conditions. If there is no proper organisation to represent shippers, the resolution of such

problems can be frustrated, or problems may be resolved in a manner which suits the other parties but ignores the interest of shippers. The immediate function of a newly--formed council will usually be to exert maximum pressure to reduce conference demands for freight increases. It must not confine itself solely to the defensive role of reacting to conference demands, but must be ready to take the initiative in collaboration with the shipping investigation unit and other arms of government shipping policy in assessing the suitability of existing services, and in investigating the possibilities of more economical alternatives.(4)

#### 6.2 The Papua New Guinea Shippers Council

On 8th March 1972, the Papua New Guinea Shippers Council was established to represent major Papua New Guinea exporters and negotiate international shipping rates. At the time of its formation it was noted that:

- . a large proportion of international shipping is owned by overseas interests who tend to operate a monopoly or cartel type service;
- . the resultant joint services tend to restrict or eliminate competition so that not infrequently individual shippers are obliged to accept freight rates at unreasonable levels;
- . high freight rates in turn affect the cost of imports and the return available to exporters and producers.

##### 6.2.1 Constraints Of The Papua New Guinea Shippers Council.

Whilst the Papua New Guinea Shippers Council was

able to achieve some measure of success in representing Papua New Guinea's international freight interests its overall effectiveness was limited by the following:

- . no legislation ( until 1982,there was no PNG legislation governing overseas shipment of goods);
- . limited representation ( membership excluded producers and general cargo users );
- . no constitution outlining responsibilities and rights of members;
- . ill-defined voting rights or representations in the council;
- . no permanent Secretariat ( no full-time staff to oversee freight negotiations or consolidate trade statistics);
- . no legal status ( no obligation on the part of shipowners to negotiate or comply with PNG Shippers Council );
- . ill-defined role of Government;
- . funding constraints.

#### 6.2.2 Steps Undertaken to Improve the PNG Shippers Council.

In 1979,the Government obtained the services of Mr.-Cyrill Webb,a consultant of the Economic and Social Commission for Asia and the Pacific ( ESCAP ),to assist Government in establishing a properly functioning PNG Shippers Council.

The 1979 Webb Report was subsequently circulated to various Government Departments and the Shipping Industry for their comments and recommendations. These included the various producers and exporters and their associations,the PNG Chamber of Commerce,the Departments of

Transport, Finance, Justice, Industrial Development, Primary Industry and the First Legislative Council.

A follow up review was also obtained with the assistance of ESCAP in 1984.

Particular developments since 1979 are as follows:

(a) Legislation -

The Overseas Trade ( Shipping ) Act was enacted in 1982. The Act provides for:

- . The Minister for Transport to have the authority to designate a shipper body to negotiate shipping rates and conditions in the outward liner services;
- . Greater participation of PNG vessels to enter the outward liner trade.

(b) Expanded Representation

Membership in the PNG Shippers Council has been expanded to include producers and general cargo users:

- . this was intended to resolve previous concerns that major exporters and Government may not adequately represent or exert their best efforts in negotiations and negotiated freight rates are merely passed on to producers and the general public;
- . the PNG Chamber of Commerce has taken the lead in representing the interests of the general cargo users. Producers and Producer Associations have also expressed their firm interest to be represented in the PNG Shippers Council.

(c) Constitution/Voting Rights -

The constitution of the PNG Shippers Council was drafted with the assistance of the First Legislative Council and the Department of Justice. Said Draft Constitution was subsequently approved by the revised members on 15th March 1984:

- . voting rights and responsibilities are clearly defined;
- . each member will be required to sign an Agreement to follow the rules and regulations set out under the Constitution.

(d) Secretariat -

The requirements for an operating Secretariat has been established and its functions and responsibilities defined:

- . initially the Secretariat shall consist of 3 permanent staff (an Executive Director, a Research Officer and one Secretary );
- . the Secretariat may be expanded as the Council becomes fully operational and requirements change. ANNEX 3 gives details of Membership, Voting Rights and Secretariat of the PNG Shippers Council.

(e) Legal Status -

The PNG Shippers Council was incorporated as a legal entity in 1986:

- . the Council has secured the approval of the Minister for Transport as being the designated shipping body as provided for under the Overseas Trade (Shipping ) Act.

(f) Role of Government -

It is desirable that the role of Government be changed from that of direct participation to that of a regulatory role. Only on extreme situations will the Government, under legislation, exercise its other powers:

- . impose final sanctions of disapproval of any restrictive agreements;
- . impose penalties on shipping lines which do not observe the provisions of the Overseas Trade (Shipping ) Act;
- . lastly, for the Minister for Transport to withdraw his support of the PNG Shippers Council should circumstances warrant such action.

Government membership of the PNG Shippers Council will also be of ex-officio capacity ( i.e. third party negotiations ). The Government representatives could play an active role in the case of a deadlock or where commercial elements do not come into play.

(g) Funding Requirements -

It was proposed that the PNG Shippers Council be jointly funded by Government and other members of the Council:

- . Government funding was scheduled to commence in 1987. This will enable the Council to establish a Secretariat with permanent officers.
- . In the event that the Secretariat is expanded or additional functions are taken up by the PNG Shippers Council, said additional costs to be taken up

by other members. ( Effectively Government's participation to reduce as a proportion of total funding requirements );

(h) Reporting Requirements -

The activities of the PNG Shippers Council be reported annually to the Minister for Transport and subsequently to the National Executive Council (Cabinet).

6.2.3 Benefits of the Restructured PNG Shippers Council

Under the proposed restructuring of the PNG Shippers Council, the following benefits are expected to accrue to the Government, exporters, producers and the general public:

- a) cheaper shipping tariffs resulting in lower domestic cost structure and savings on foreign exchange;
- b) improved terms and conditions of trade for shippers;
- c) related shipping benefits (e.g. improved quarantine administration and shipping schedules);
- d) differing shipping interests can be reviewed and and a consolidated position arrived at;
- e) provide inputs to policy decisions that may be considered by Government;
- f) establish an information base which provide a greater understanding of the industry and increased negotiating powers;

g) liason with other Shippers Council in the region.

#### 6.2.4 Future Developments

In the Government's continued efforts to improve the Shipping Industry, the following major developments would have a significant impact on the PNG Shippers Council or the role that the Council will play:

##### a) Liberalisation Policy -

The Ministry of Transport in the past had reviewed the costs and benefits of adopting an "open sea " policy which would remove current restrictions on shipping and encourage competition. Due to strong opposition from some sectors of the industry the idea was shelved. However should this come about in the future, a strong body is required to represent shippers in negotiations with shipowners. The role of PNG Shippers Council would be critical;

##### b) Aid Assistance -

International organisations such as ESCAP have strongly supported the establishment of the PNG Shippers Council. Further assistance could be requested in so far as establishing an information base and other technical assistance for the PNG Shippers Council.

##### c) Corporate Review -

It is proposed that a review of the effectiveness and future funding of the PNG Shippers Council be undertaken at least once every five years.



(4) Report by UNCTAD Secretariat

"Protection of Shipper Interests": Guidelines for

-----  
Developing Countries.1978

## 7. FREIGHT STUDY UNIT

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In relation to the Shippers Organisation it is important to discuss the role of a Freight Study Unit as these two related organisations play an important part in assisting and influencing Government in formulating its shipping policy on a sound basis.

### 7.1 The Role and Function of a Freight Study Unit (FSU)

The function of a freight study unit/bureau or similar organisations is to assist the government in policy formulation and to assist shipowners and shippers' organisations to function in the interest of national economy. That includes:

(a) Assisting the government by advising on national shipping policy ;

(b) Analysing and investigating shipping services and freight rate structures ;

(c) Assessing costs and revenue of individual conferences from and to countries for different commodities ;

(d) Analysing on a continuing basis the impact of shipping services and freight rates on trade ;

(e) Examining and advising on ways and means available for strengthening the bargaining power of shippers ;

(f) Acting as a research centre for all matters connected with shipping ;

(g) Advising the government on the basis of suitable quantitative and qualitative analysis on the development of shipping and fleets.

## 7.2 Organisation and Scope

Freight Study Units and similar organisations already established differ in their function and legal or administrative status. There are no generally applicable principles for setting up such units and it has to be left to countries to find the best way of meeting their own needs with regard to matters on type of functions, responsibilities and administrative organisation of units. The administrative location of such units is not in itself of importance provided there is a clear understanding among the various branches/divisions of government that close co-operation in shipping matters and policy work is essential and that co-operation is built into the organisation of the administration.

Most of the freight study units play a role in the formulation of governmental policies regarding the maritime industry. In other words, freight study unit staff members often contribute to the process of decision making in this field. However, the scope of their involvement in policy making differs considerably. Some freight study units are limited in this respect to freight rate matters only, while other units also advise on shipping economics and even legal issues in a very wide field. It seems that the involvement of a freight study unit in policy making is to a large extent deter-

mined by two factors:

(a) The position of a freight study unit in the general administration. The closer its position to the lines along which policy decisions are made, the greater its possible contribution to these decisions;

(b) The practical experience of freight study staff members in the field of shipping and their awareness of the needs of national shipping interests. Whatever the formal or informal functions are of a freight study unit, its ability to provide information and advise of a high quality seem to depend on the following factors:

(a) Staff and Organisation

All existing freight study units are part of a governmental organisation. Their staff members are therefore civil servants and are subject to the usual transfer on the grounds of promotion or otherwise. Taking into account that freight study units are generally small organisations and usually do not provide internal promotion opportunities, the average time a staff member spends in a freight study unit is rather limited. This situation has some serious consequences on the effective functioning of the units. First, in-service training of staff members is hardly beneficial to the unit concerned because once a staff member is trained and acquired sufficient practical knowledge to carry out his job properly (which may take a period of two to three years) he or she is probably due for transfer to another job. Secondly, frequent changes in staff composition may have a negative effect on the continuity of a freight study unit's activities which seldom go beyond basic data collection and compilation only. Under such circumstances it is hardly possible for a freight study unit to go deeply into the

methodological and analytical problems which it usually encounters. Another effect could be that formal and informal contacts with other governmental, public and private bodies have not had much of a chance to develop sufficiently to guarantee a free flow of information and consultation to the freight study unit concerned.

#### (b) Information

Freight Study Units or similar organisations must seek to collect or to have collected suitable information on a continuous basis. Processing, compiling and analysis of shipping and cargo data and information must also be pursued on a continuous basis as these form an important tool in the evaluation of transport costs and adequacy of shipping services. In this connection, the need for the implementation of the uniform system on economics statistics of shipping (L.2 Scheme) developed by the Economic and Social Commission for Asia and the Pacific (ESCAP) secretariat several years ago has been stressed by staff members of many freight study units and is recognized by the members of ESCAP countries that such a statistical system not only provide the governments, shippers' councils, shipowners, port authorities and similar organisations and institutions with information necessary for the formulation of sound policies and for decision-making in various situations but also represents the best approach to long-term development of a comprehensive information system on shipping, ports and commodity cargo statistics.

There is also a need for shipping information of a more general nature, which will enable freight study unit staff members to form an opinion on global, regional, sub-regional and national developments in shipping. This

type of information (to be found in leading shipping magazines, newspapers and periodicals), will improve their knowledge of shipping matters, thus improving the depth and practical value of their analyses and advice.

This type of information is considered to be of great importance especially when a freight study unit is required to contribute directly to shipping policy formulation.

Regarding the analysis of freight rate data, it has been found to be helpful if a specialist with practical experience and knowledge in shipping matters can be called upon to advise the freight study unit. The services of such a specialist is also required in cases where freight study units contribute substantially to the strengthening of shippers' councils in their negotiations with conferences.

#### (c) Relations with other Organisations

A freight study unit needs clear guidance from shippers on the specific nature of their problems and needs for assistance in directing its limited resources to the solution of major problems. On the side of the shippers, this might require a high degree of co-operation to define common interests.

A significant contribution to the work of a freight study unit requires a certain co-ordinated effort from the shippers and it can only be achieved if the shippers are in a position to work closely together with the freight study unit in collecting the required information and in presenting this information in a useful form.

It is further justified that good working relations with national shipping lines, port authorities, commodity organisations and export promotion organisations are of

equal importance.

### 7.3 The Work and Responsibilities of a Freight Study Unit

The work and responsibilities described below should be regarded as a general check-list of work programmes which the freight study unit should cover in the course of examining and investigating existing shipping services serving the country. It would be impossible to give, in general terms, an exhaustive description of the work and responsibilities of a unit due to the fact that investigatory work of a freight study unit, by its nature, is a continuous process in which the outcomes of preliminary investigations determine the course of subsequent investigations.

Freight Study Unit's main concern is to assemble inbound and outbound cargoes which are currently being moved by existing shipping lines serving the country.

#### 7.3.1 Basic Data and Information Collection

- (i) Cargo Flows - needs data on port-to-port cargo movements; inbound and outbound in each trade routes served by various shipping lines expressed in gross metric tons or measurement tons with sub-totals for the main commodity movements.

- early implementation of the uniform system of economic statistics of shipping to derive necessary basic shipping and cargo data for analysis.

- (ii) Vessels and Vessel Movements

- listing all the conference vessels which load for

the conference destination area, preferably in chronological order according to final date of sailing; the loading and discharging ports with dates; cubic and deadweight capacities of the vessel.

Sources of information:

- official list of conference sailings;
- shipping column of local newspapers;
- sailing schedules issued or published by individual lines;
- Lloyds Voyage Record provides a useful cross check on the worldwide movements of vessels;
- lists of arrivals and departures obtainable from port or customs authorities;
- data on cubic and deadweight capacities of vessels obtainable from Lloyds Register or Marine Department for coastal vessels;
- frequency of listings should be on monthly, quarterly and totalled on annual basis.

(iii) Shipping Requirements

- to make/obtain some estimates on service frequency for each port-to-port movement in satisfying the needs of shippers; (the possibilities of rationalization in terms of shipping service frequencies);

(iv) Analysis of Freight Rates and Terms and Conditions of Service

- information on freight rates are essential for the work of freight study units and the units may therefore have to use their own resources for obtaining and checking freight rate information;
- assessing and monitoring the frequency and ade-



quacy of shipping services and determining availability of shipping space and its utilization.

### 7.3.2 Containerization

Containerization has become a major issue of shipping and port policy. Freight study units may be required to obtain and analyse information on container movements and its costs to shippers of using this alternative cargo system. In this connection, the units may be required to assess the effects of containerization on the cost of shipping and importing cargo and on different classes of ships. Matters to be studied are container rates; imbalances of container movements; practices of the container consortia and the costs and prices of cargo consolidation.

### 7.3.3 Route and Commodity Studies

Route and commodity studies are among the fundamental tasks to be undertaken by a freight study unit. The majority of shipping policy problems e.g. negotiations with shipowners, trade negotiations, decisions on whether or not to seek entry into a conference; cargo reservation policies require information in this form.

The following guidelines provide some suggestions for the design and content of route and commodity/route studies:

- the operational details of export shipping including the geographic pattern and volume of shipments by commodities;
- seasonal variations in exports and freight rates;
- the working of the allotment/cargo consolidation scheme by commodity associations;

- the balance of inbound/outbound cargo flows and the number of calls by each ship and lot sizes for loading/discharging;
- methods of loading/discharging including the time spent in port at both ends of the trade route;
- labour situation and port facilities at both ends;
- packaging, cargo handling and marking, stowage and sorting of cargoes.

#### 7.3.4 Liner Conferences: Organisation, Practices and the Regulation of Conference Practices.

Freight study units will be expected to study the organisation and practices of the conferences operating in the country's liner trades. The features of conference organisation to be studied may, inter-alia, cover membership, the activeness of members, rules on entry, the regulation of members' participation in the trades, sailing schedules, cargo loading limits/restrictions, pooling arrangements, contracts with shippers, contract rates, deferred rebates, port congestion surcharges, currency adjustment factor (CAF) and bunker adjustment factor (BAF).

#### 7.3.5 Negotiations with Shipowners and Shippers.

Freight study units may be called upon to assist or participate in negotiations between the government and shipowners or between shippers and shipowners. The guidelines in such negotiations may include:

- (a) the principles of such negotiations;
- (b) the roles which freight study units may play in such negotiations;
- (c) the possibilities of agreeing on formulae before

- notification of any rate changes;
- (d) negotiating formulae;
- (e) preparatory staff work;
- (f) analysis and recording of the results of negotiations.

#### 7.3.6 Freight Investigation Service

The freight investigation services seek, among other things, to mediate between individual shippers and shipowners in a port and to investigate shippers' complaints. The freight study unit may be called on occasionally to investigate and help to settle individual disputes. Routine procedures for receiving, investigating and dealing with shippers' complaints should also be of general interest.

#### 7.3.7 Project Analysis from the National Viewpoint

The main examples in the field of shipping are decisions to acquire ships or decisions on the establishment of new services (e.g. new routes). Projects of this type would not normally have to be undertaken and analysed by freight study units. However, the units might have to assist the government in interpreting and reviewing the analysis provided by shipping companies/lines, planning offices of the Ministry of Transport or outside consultants. In particular the unit will be in a position to provide rough assessment of the net benefits derived from such a project.

## 7.4 The Uniform System Of The Economic Statistics Of Shipping In The ESCAP Region

### 7.4.1 Background and Purpose

Lack of suitable statistical information is a major obstacle to the formulation of national shipping policies in developing Economic and Social Commission for Asia and the Pacific (ESCAP) countries. In most of these countries there is a lack of appropriate information regarding composition of the fleet carrying the country's imports and exports, the quality and frequency of services rendered by liners, tramps and other carriers, vessel utilization, the flow of commodities between given ports etc.. Export promotion and the foreign exchange earnings are subjects of widespread concern to policy decision makers. Information on the effects of freight rates on the international carriage of goods which is required in the formulation of government policies, in the developing countries of the ESCAP region, cannot be easily and reliably obtained except through the introduction of a proper system for the collection of shipping statistics. National Shippers' Councils, in representing their interests vis-a-vis the shipowners/liner operators, cannot do so intelligently and effectively without knowing their country's use of shipping services. The development of national merchant marines requires solid quantitative information as a guide in choosing vessels and routes.

The ESCAP Committee on Shipping, and Transport and Communications at its fourth session, held at Bangkok from 16-22 December 1980, recognized that such a statistical system not only provided the Governments, shippers councils, shipowners, port authorities and similar organisations and institutions with information necessary for the

formulation of sound policies and decision-making in various situations but also represented the best approach to long-term development of a comprehensive information system of shipping, ports and commodity cargo statistics.

The Statistical Commission of the United Nations Economic and Social Council, at its twentieth session held in New York in February 1979, discussed the uniform system of collecting economic statistics of shipping and decided that the system should be promoted among all the developing countries beyond the ESCAP region. In addition, it invited interested countries, including developed countries, to examine the possibility of adopting the framework of the system. At its thirty-eight session in March 1982, in recognition of the importance of the availability of shipping information and data, the Commission urged the secretariat to continue to assist the developing member countries in the collection and compilation of economic statistics of shipping (known as L.2 Scheme) as it is an essential tool for policy formulation and forecasting for the long-term development of a comprehensive system of shipping services, fleet composition and port and commodity cargo statistics in the ESCAP region.

#### 7.4.2 Objectives

The implementation of the uniform system of economic statistics of shipping also aims at providing a new dimension in co-operation among developing maritime countries at regional and sub-regional levels for:

(a) Joint shipping services, facilitating rationalization of shipping services leading to reduction of operating costs of ships and savings to shippers through lower freight rates ;

(b) Design of ship types used for common services

and fleet programming ;

(c) Schemes for cargo consolidation for compatible commodities on the same route ;

(d) The implementation of the United Nations Code of Conduct for Liner Conference ;

(e) Promoting economic and technical co-operation among the developing ESCAP countries through the implementation of this scheme ; and

(f) The economic statistics of shipping is also considered an essential input for the ESCAP ship users' co-operation project (SUCOP) and its models and tools which have also been developed by the secretariat for the calculation of ocean transport costs, and for evaluation of shipping services and freight rates level structure.

#### 7.4.3 Short-Term Action : Meeting the Urgent Need for Information and Commodity Flow

The immediate objective of implementing this system of shipping statistics is to assist all the developing maritime countries in the ESCAP region to improve the collection, compilation and processing of shipping data. This could be achieved by member countries through the establishment of three basic files, namely commodity file, ship's movement file and ship description file which will contain information on basic data elements already available in existing source documents. It means, therefore, straight recording of the required data from the relevant documents for ship's movement file and for ship description file. As to the commodity file, most of the required elements are already being recorded in the regular compilation of trade statistics.

The implementation of this system also aims at securing uniformity in the concepts, definitions and methods

of measurements adopted by the member countries in the collection and presentation of economic data on shipping as recommended by several regional workshops on Economic Statistics of Shipping held by the ESCAP Secretariat. These workshops also recommended the capturing of minimum data on shipping as described in the three basic data files.

#### 7.4.4 Long-Term Action : Development of a Uniform System to Link Commodity Flows and Shipping Movements

The compilation of up-to-date statistics in the form of a comprehensive network of commodity flows by sea will contribute to a better understanding of the demand for shipping services. The use of such statistics for other purposes is, however, limited and a fully developed system of economic statistics of shipping should provide answers to the following questions :

(a) What is the efficiency and frequency of services rendered by liners and tramps in carrying a country's imports and exports ?

(b) Who are the operators of the vessels and what are their market shares ? and

(c) What are the freight charges levied by the carriers for their services ?

In order to answer the above questions, it is necessary to secure the following information :

(a) A complete tally of movement of ships into and out of the individual ports of a country ;

(b) Identification of each cargo shipment in terms

of SITC (The Standard International Trade Classification) or CCCN (The Customs Co-operation Council Nomenclature) headings with a cross-reference to the ship carrying the cargo ;

(c) Characteristics of ships, their owners and/or operators and types of services (liner or tramp) that they provide ; and

(d) Freight charges for each shipment.

Most of the information listed above is available in most market economy countries from the following sources :

- (a) Customs Documents
- (b) Port Authorities Records
- (c) Ship Manifest

#### 7.4.5 Framework of the Uniform System

Countries interested in developing the economic statistics of shipping should establish three basic data elements on a standard format as follows.

The three basic files :

(1) Commodity file - This file contains thirteen data elements, the majority of which are normally recorded on customs documents for imports and exports. The purpose of the file is essentially to provide information on commodity movement from one port to another with necessary provisions to link these flows with the other two files.

(2) Ship's movement file - This file contains eight data elements, usually available in ships movement documents required by port authorities or harbour administrations. The record provides basic information on



the amount of cargo,in aggregated terms,carried on board,discharged from,and loaded into,a particular ship providing a particular service.

(3) Ship description file - This is a semi-permanent file,containing eleven data elements which define the relevant characteristics of a ship. Such information is often available on ship's movement documents.

TABLE 2.gives the data elements in the Three Basic Files.

TABLE 2.

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THREE BASIC DATA FILES OF THE UNIFORM SYSTEM  
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1. Commodity File

- (a) Ship's Name (or other identifier)
- (b) Date of Arrival/Departure
- (c) Port of Reference
- (d) Foreign Port of Loading/Discharge
- (e) Country of Origin/Destination
- (f) Direction of Flow of Commodities (inward/outward)
- (g) Commodity Classification (SITC or CCCN)
- (h) Quantity in Gross Weight (in metric ton)
- (i) Quantity in Cubic Volume (in cubic metre)
- (j) Quantity in Net Weight (in metric ton)
- (k) Value
- (l) Freight Rates/Charges
- (m) Packaging

2. Ship Movement File

- (a) Ship's Name
- (b) Date of Arrival/Departure
- (c) Port of Reference
- (d) Foreign Port of Call
  - previous port
  - next port
- (e) Cargo on Board on Arrival (gross metric tons)
- (f) Cargo Discharged (gross metric tons)
- (g) Cargo Loaded (gross metric tons)
- (h) Service Type
  - Liner

TABLE 2 (contd.)

- . conference (name)
- . non-conference
- Tramp

### 3. Ship's Characteristics File

- (a) Ship's Name
- (b) Gross and Net Registered Tons (GRT and NRT)
- (c) Deadweight Tonnage of Ship (DWT)
- (d) Owner's Name (usually a company)
- (e) Operator's Name
- (f) Ship Type
- (g) Cubic Capacity of Ship (grain/bale)
- (h) Length
- (i) Draught
- (j) Flag
- (k) Date of Build

## 7.5 Uses And Benefits Of The Uniform System Of Shipping Statistics.

A brief summary of the benefits and uses of the system is given below. While these benefits are obviously significant for the developing countries, they are equally meaningful to the developed countries as well.

### 7.5.1 Balance of Payments

The balance of payments is of continuing concern to most countries and an accurate assessment is important. Payments for or receipts from "invisibles" such as shipping often constitute a large fraction of the total payments involved in invisible trade; probably between 10 and 18 per cent would be the usual range of freight charges, though in some countries, the percentage would be much higher. In many balance of payment statistics, the difference between f.o.b. and c.i.f. valuation is based on very fragmentary data or even "rule of thumb". A systematic collection of ocean freight charges would assist this identification of flows of foreign exchange.

### 7.5.2 Governments/Research Institutes/International Agencies

The economic statistics of shipping will serve as a basic input for the following studies :

- (a) Port management and development studies ;
- (b) National fleet development plans also require regular and reliable statistical information on shipping demand and supply operating to and from a given country/-region - this may lead to the expansion of exports from traditional markets to new ones ;

(c) Studies on the establishment and development of national line services vis-a-vis existing shipping services operating to and from a given country/region;

(d) Decisions on port investment, fleet operations, vessel acquisition and commercial decisions on investment and market orientation will depend very much on knowing what quantities of different cargoes are carried by different types of vessels operating to and from a given country/route ;

(e) Monitoring and evaluation of the utilization and performance of merchant fleets serving a given country or area(s) and the share contribution of the shipping industry to the national economy ;

(f) Studies on the share of liner-type cargoes in the foreign sea-borne trade of the countries of a region in relation to other regions or the world average ; - these require information on detailed commodity flows in terms of quantity by sea distance ;

(g) The study on long-term changes in shipping characteristics of the exports and the imports of developing countries - this study may highlight whether there is any long-term changes to be observed in the balance between general cargo and bulk cargo movements ; and

(h) The administrative regulation of domestic shipping laws (such as restrictions of certain traffic to national carriers etc.).

### 7.5.3 Freight Study Units

(a) Formulation of national shipping policies and strategies ;

(b) To conduct analysis of freight rates and study the effects on the freight bill on country's imports and exports ;

(c) To study port-to-port cargo flows and costs of shipping ;

(d) To assist shippers and governments with necessary data for negotiating the rates and terms with the conferences ; and

(e) To conduct route analysis studies for their efficacy and suggest alternatives for improvement or promotion of shipping services.

#### 7.5.4 Port and Port Management

##### (a) Data on Ship Traffic

A detailed analysis of shipping traffic is of great importance both for economic evaluation of prevailing trends on the trading pattern of the port, and for the purposes of port planning. Bearing in mind that port facilities must always be compatible to the size, type, length and draft of vessels that use the port. These parameters will have a decisive impact on the depth and design of the entrance channel and of a turning circle, as well as on the depth of water required inside the port area and individual berths. Properly collected data on Uniform System of Shipping Statistics will provide port planners with the necessary information.

##### (b) Data on Cargo Flows

A detailed analysis of the movement of goods by type of packaging, loaded and discharged in a given port, type of trade (foreign, domestic or transit trade), origin and destination and different types of ships is essential for the establishment of cargo forecasts and the identification of additional facilities required to cope with the

composition and seasonal fluctuation of existing and future traffic.

Classification of movement of goods by origin and destination is also essential for the study on the pattern of port traffic. The information on origin and destination of goods is useful in connection with cargo forecasts especially to determine specific trends in trade to and from various geographical areas/regions. The sailing distance derived from the origin and destination statistics is one factor influencing the ship's size and the transportation cost.

#### 7.5.5 National Shippers' Council/Shippers

One of the major problems facing a national shippers /organization is how to have access to information which will equip them with the maximum bargaining power in freight rate negotiations with shipping conferences. The availability of shipping statistics will enable the negotiators to have the knowledge on port-to-port cargo movements in each trade with major breakdown for the main commodity movements, shipping services in terms of liner or non-liner services, utilization of ship space, composition and type of fleet serving the trade to and from a given port (area).

A detailed study on the pattern, frequency and cost of providing the shipping services is necessary to ascertain the nature and cost of the services, information is required on the age, speed and tonnage of vessels in operation, tonnages and types of cargo loaded or discharged at different ports within the country as well as the quantities loaded or discharged at ports of origin and destination.

Vessels and vessel movements - listing of all ves-

sels which take up cargo for scheduled destination (preferably in chronological order according to final date of sailing). For each sailing, information is needed on name of vessels, the ports of loading with dates, the scheduled port of discharge (i.e. those ports for which cargo is being accepted at direct rates of freight) and the cubic and deadweight capacities of the vessel.



## 7.6 The Current Status Of Overseas Shipping And Cargo Related Statistics In Papua New Guinea

### 7.6.1 Freight Study Bureau (FSB)

Papua New Guinea has, within the Maritime Division of the Department of Transport, a small unit entitled "Freight Study Bureau" which is located in Port Moresby. The FSB is currently staffed by two shipping officers assisted by four statistical clerks in the compilation and publication of overseas and coastal shipping statistics.

The collection of shipping statistics was implemented in 1974 for coastal and domestic trade but subsequently extended to overseas trade. At present, overseas shipping statistics are compiled manually from manifests submitted by shipping agents/lines at various ports in Papua New Guinea. The statistics are made available on a quarterly and annual basis for distribution to relevant government and non-government organizations in the country.

Substantial amount of computer print-outs relating to quarterly overseas shipping and cargo statistics are tabulated by the National Computer Centre but only a small proportion of these print-outs is published and included in quarterly publication of "overseas shipping statistics".

The extraction of freight information in relation to the outward manifests is currently assigned to statistical clerks and a format (FSB 001) is prepared for this purpose. Apart from freight information being extracted, other information like vessel, owner of vessel/line, voyage number, arrival/departure date, commodity description, weight, measurement weight, port of discharge, exchange rate in USDollars equivalent, actual freight payments, CAF, BAF, -

number of containers and type of packaging, are being extracted from outward manifests submitted by shipping agents/lines. All information is then transcribed onto computer input forms for data entry and processing. The extraction of the above information requires a considerable amount of clerical time and skill.

While information on shipping and the freight charges on national exports is at least available in the Freight Study Bureau, the situation remains very unsatisfactory as regards similar information on imports. More attention is required on the compilation of import freight bills. Payments for receipts from "invisibles" such as shipping often constitute a large proportion of total payments involved in "invisible trade", probably between 10 and 20 per cent.

One of the major problems faced by the FSB is the lack of experienced staff to discharge the function and duties of a freight study bureau. This is partly created by the tendency to transfer officers who have gained considerable experience and some seniority to other branches of the government service. It is desirable to create a career development for specialists in maritime policy work within the bureau so that experience accumulated could be retained without affecting the effective functioning of the unit.

It is duly noted that there is a considerable delay in the collection and consequently publication of overseas shipping statistics. This delay is partly caused by shipping agents/lines not furnishing ships' manifests to the FSB in time. Lack of regular flow of source documents has caused a considerable time and strenuous efforts by the staff of the FSB. In this regard more efforts should be exerted from the top to persuade and inform shipping agents/lines about the importance of shipping statistics

and the submission of source documents (cargo and freight manifests) without delay and the role they play in the entire production process of overseas shipping and cargo statistics of Papua New Guinea.

#### 7.6.2 Foreign Trade Statistics

Foreign trade statistics of Papua New Guinea are regularly compiled and published by the National Statistical Office. The basic documents used in the compilation and publication of trade statistics are based on customs entries e.g. Home Consumption Entry, Removal to a Customs Warehouse or a factory entry, Entry ex-warehouse local removal and other forms for imports and entry for exportation from a warehouse or a factory, export entry and other forms for exports. However, the stress is mainly on trade statistics - this is the practice in most government statistical bureaus. It is therefore important to remember, especially for those policy makers in the shipping industry, that standard foreign trade statistics are not designed nor compiled for the analysis work in shipping route studies and analysis of freight charges.

Existing foreign trade statistics do not report full commodity/country detail of exports for individual ports of shipment. None of the existing trade statistics distinguish between different ports of discharge/destination within one and the same country. But the costs of shipping to different coasts of certain large countries may be very different (e.g. to Calcutta or Bombay in India; to the Atlantic or Pacific coast of the USA or Canada; to Baltic or Mediterranean ports of the European countries).

Most foreign trade statistics state weights or volumes for the majority of items in SITC Section 0-5 inclu-

sive (Section 0 - food and live animals ;Section 1 - beverages and tobacco ; Section 2 - crude materials, inedible, except fuel ; Section 3 - mineral fuels, lubricants and related materials ; Section 4 - animal and vegetable oils and fats ; Section 5 - chemicals) but for only a small proportion of items classified in SITC Sections 6 - 8 inclusive (Section 6 - manufactured goods classified chiefly by material ; Section 7 - machinery and transport equipment ; Section 8 - miscellaneous manufactured articles). The quantity of manufactured articles is either stated in units or in terms of area or length measurement (square metres or yards for textiles), or not at all. The quantity data for foreign trade statistics is thus often inadequate for shipping studies.

It should be further noted that the concepts and definitions for foreign trade differ to those used for compiling shipping and cargo statistics. The customs documentation may be incomplete for shipping and cargo purposes in respect of temporary trade, goods in transit and other items (e.g. diplomatic goods) which are not entered on entry documentation of customs.

Information on freight charges appear in some of the customs entry but no separate compilation is being attempted or tabulated. This problem can be easily overcome by adopting the following procedures :

(a) For exports it is likely that the exporter may not know the freight charges for commodities sold f.o.b. prior to obtaining an export permit. But the shipping agent/operator will certainly be aware of the freight charges and quantity in gross weight or measurement weight at the time the manifest is prepared. It is to be noted that manifests are prepared based on running summary of bills of lading. Therefore, it would be simple for the ship's agent/operator to fill in both the freight

charges and gross weight/measurement weight before delivering the manifests and the export customs entry to the Collector of Customs.

(b) In the case of imports, the importer will certainly know the amount of freight charges he has to pay. If goods are bought c.i.f. by the importer, he can simply obtain such information from the seller. Therefore it is possible for the importer to enter freight charges in the import customs entry prior to submission to the Collector of Customs for approval. In some cases, the importer may not have the information on the gross weight and freight charges of these imported goods as such information is usually given in the cargo/freight manifests which are kept by the ship's agent/carrier.

While the importer should be in a position to know the freight charges of his imported goods irrespective of whether he bought them f.o.b. or c.i.f., the agent/carrier is also in a position to know them as this information is shown on the manifest which he receives from the agent's counterpart in the port of loading. For the sake of simplicity in operation, it would be better to ask the agent/-carrier to provide information on freight charges and gross weight of goods to the importer prior to submission of the import customs entry to the Collector of Customs for necessary approval.

#### 7.6.3 Papua New Guinea Harbours Board

Papua New Guinea Harbours Board prepares a substantial amount of traffic and cargo statistics which are mainly of interest to the day-to-day port operation and management and in the planning of shipping services. These forms can be listed as follows :

(a) Pilotage request form (HB 16) comprising :

ship's name, date and hour for pilotage services, and berthing request.

(b) Application for permit to handle dangerous goods or cargo adjacent to dangerous goods - (schedule 3, form 1) comprising : name of vessel, agent or owners, master, port and berth, application for permission to handle, load or discharge dangerous goods, and statutory declaration by master of the vessel.

(c) Dangerous goods list (form 2)

(d) Application for berth (form 9) - comprising : port, name of vessel, GRT, port of origin, arrival date, quantity of cargo in weight/measurement tonnes, estimated draft of vessel on arrival (forward, aft, length overall in metre), cargo to be shipped in weight/measurement tonnes, name of licensed stevedore, and name of agent.

(e) Permit to convey or handle dangerous goods or bulk quantities of oil (form 4), comprising : name of vessel, agent or owner, port and berth, permission to load/discharge/convey and statutory approval by authorized officer of Harbours Board and conditions (if any).

(f) Papua New Guinea Harbours Board Boarding Report comprising : date, rotation number, time of arrival, time berthed, name of vessel, berth occupied, port of registry, master, agent, stevedore, last port, next port, gross tonnage, net tonnage, length overall, registered length, port dues, navigational aid certificate, anticipated water requirements, details of dangerous goods.

(g) Stevedoring Report - container vessels (form HB 22) comprising : port, agent, ship, rotation number, berth, date and time of arrival in port, total time in port, date and time berthed, date and time started to discharge, date and time started to load, date and time finish discharging, date and time finish loading, working hours lost on account of - shift times, rain, lack of equipment, equipment

breakdown, labour dispute, net working hours, berthing delays, non-working time alongside, cargo handled, stevedoring company manager's signature etc.

Similar formats are also used for container, Ro/Ro vehicle carrier, overseas breakbulk vessel and coastal vessel over 150 GRT.

(h) Shipping Register and Operations Report (form HB 1) comprising : rotation number, vessel, master, port of registry, gross/net tonnage, last port/next port, time and date of arrival, time and date berthed, time and date sailed, hours delayed till berthed, hours at berth, overall length (metres), in/out cargo handled, tonnages, cargo dues, rate per gang, type of vessel, berth occupied, port dues, date/Rec. Number, pilotage movements, analysis of ship usage, overseas cargo and coastal cargo summary handled at various ports, cargo dues.

#### 7.6.4 Recommendations

It is to be noted that timeliness in the production of any statistical information is very important to policy makers and users of statistics in general.

It needs to be stressed that for the FSB to function effectively, its management and functioning should receive the benefits of integrated and co-ordinated approaches on the part of various departments/agencies of the government and private sector which are concerned with trade and transport. Good working relations with shipping lines, agents, customs office, port authorities, commodity associations and related organisations are of equal importance.

Specialist training courses in collaboration with academic institutions/international organisations offering specialized training courses in shipping and ship-

ping management will not only help to retain the services of existing staff but also attract new entrants into the field of work undertaken by the FSB.

Statistical workload for the FSB - for the country as a whole, the total number of ships arriving and departing from 12 major ports is estimated at 3,600 calls (inbound and outbound) for the year 1984 i.e. averaging 300 movements per month. In this connection, about 300 sets of inward/outward cargo and freight manifests are being submitted by all shipping agents to FSB. Taking an average of 20 working days per month, the number of manifests is 15 sets (each manifest may run to about 30 pages in thickness) per working day.

The local shipping agents should play a major role in the collection and implementation of uniform system on economic statistics of shipping due to the fact that more than 90% of national seaborne trade is being carried by foreign shipping companies/lines. While it is generally difficult to get necessary information and co-operation from foreign shipping companies/lines, it is not so from the local shipping agents representing those foreign shipping companies/lines. Any shipping line, whether foreign or national, is dependent on its agents at ports in different countries for its operations and information. By making use of the same source for its information and statistics, the national government will be in a better position in dealing with the local and foreign shipping companies/lines operating in Papua New Guinea.

The collection and compilation of shipping statistics according to the requirements of the uniform system on economic statistics of shipping is feasible and desirable as a long-term solution to many existing problems faced by the FSB.

To facilitate early implementation of shipping sta-



tistics, a new declaration form is devised and this form - Shipping General Declaration for submission in duplicate together with the cargo and freight manifests to be furnished by the shipping agents to the Collector of Customs not later than 10 days after the arrival/departure of each vessel. The adoption of this form has the following advantages :

(a) To obtain regular, reliable, and adequate information on ship's movements and its characteristics ;

(b) To monitor and regulate inbound/outbound vessels - there is a possibility that the form could, in future, be served and used as "clearance document" to be enforced by the Maritime Division of the Department of Transport ; and

(c) To adopt similar format on "General Declaration" as recommended by the International Maritime Organization in its publication - "Facilitation in Maritime Travel and Transport".

## 8. PAPUA NEW GUINEA HARBOURS BOARD

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### 8.1 Functions

The Papua New Guinea Harbours Board is a Statutory Body constituted under the Harbours Board Act (Chapter 240 of the Revised Laws of Papua New Guinea) responsible to the Minister for Transport.

The Board consist of the Chairman and six members appointed by Cabinet. The Chief Executive is the General Manager who is appointed by the Board.

The Board is responsible for the administration, operation and control of all activities associated with the movement of ships and cargo handling within the defined limits of the ports declared under the Harbours Board Act as coming within its jurisdiction.

The Harbours Board has been appointed as a Pilotage Authority by the Minister under the Merchant Shipping (Pilotage) Act of 1976 and is responsible for the control of pilotage services in all declared ports.

The Minister for Transport has directed, under Section 176 and 177 of the Merchant Shipping Act, that the Harbours Board should be responsible for the provision and maintenance of certain aspects of navigational aids within the declared ports. The Board also acts as Agents for the Department of Transport for the collection of "Navaid's Fees".

The Board is financially autonomous and is required to submit to the Government annually financial statements approved by the Auditor General. Charges and Dues are set out in the By-Laws which require the approval of the National Executive Council and the Head of State.

Out of revenue the Board must provide for the management and maintenance of the ports, depreciation, interest

and payment of loans, land rates, rents, insurances and other miscellaneous provisions. The Board is subject to Government tax regulations.

The Board is also required to provide for a proportion of capital works expenditure to be met from revenue supplemented by loans from international sources negotiated by the Government.

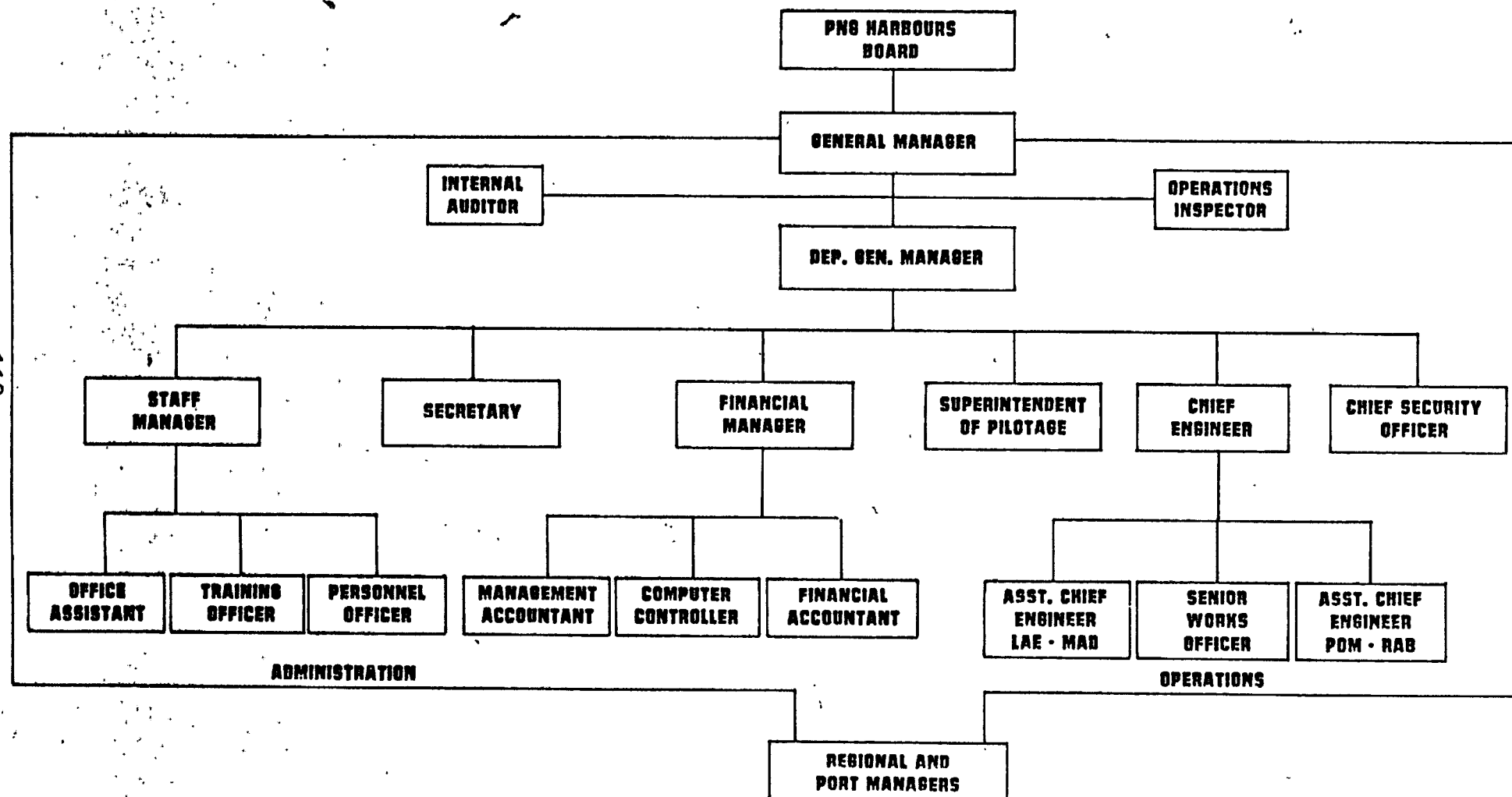
There are 16 ports declared under the Harbours Board Act, which, excepting Lae, are grouped into 3 regions for administrative purposes.

	Lae	
Port Moresby	Madang	Rabaul
Daru	Wewak	Kimbe
Oro Bay	Aitape	Kavieng
Alotau	Vanimo	Buka
Samarai	Lorengau	Kieta

FIGURES 5 shows the administrative structure of the PNG Harbours Board. FIGURE 6 gives the locations of the declared ports.

Only these declared ports are controlled by the Harbours Board. There are numerous other publicly and privately operated ports which are regulated by the Marine Division of the Department of Transport.

Ports are grouped into 3 regions centred at Port Moresby, Madang and Rabaul, with a Regional Port Manager exercising responsibility for the management of all ports within his region. The regional groupings of the ports are as listed under the section headed "Declared Ports". Each port, excepting Aitape, has a port manager at that port. The Port Managers are assisted by an establishment of operational, administrative and maintenance staff whose



Source: Papua New Guinea Harbours Board Annual Report 1983.

numbers vary according to the size of the port. The port of Aitape is managed by agents of the Board and the district officer is nominally Port Manager.

At each declared port there is a Port Advisory Committee consisting of 3 ex-officio members and up to 9 members with alternatives, representing all interests amongst port users. Members are appointed for two year terms by the Minister for Transport. The functions of the Committees are to discuss local port problems and operations and advise the Board on such matters and put forward proposals for improved efficiency. The Committees also have power to make local rules to regulate port operations.

## 8.2 Port Development

The Board is responsible for the provision of facilities and the planned development of the declared ports and must submit to the Government each year its Capital Works Programme covering the next five years. Long term development plans have been drawn up for all the major ports as well as short and medium term projects some of which have already been realised.

Papua New Guinea Harbours Board began rehabilitation work on 10 of its ports in 1986, with a Government loan of US\$15 million. In its massive programme, the Harbours Board will pay special attention to the development of Port Moresby, capital of the country and the administrative centre of the Central Province. Port Moresby is the major town on the South Coast of the mainland, although Lae is Papua New Guinea's biggest port.

A number of developments have influenced vessel traffic through Port Moresby, including the phasing out of beer and beer products trade between Port Moresby and

FIG. 6



GENERAL LOCATION PLAN OF  
PORTS  
UNDER THE CONTROL OF THE  
PAPUA NEW GUINEA HARBOURS BOARD

Source: Papua New Guinea Harbours Board Annual Report 1983.

Lae, which generally serves the Highlands region and Morobe Province; the phasing out of import cargo for the Ok Tedi copper and gold project, transhipped from Port Moresby to Kiunga; the upgrading of Port Moresby urban water supply; expansion of Port Moresby's hydropower resources, and the construction of an additional hydropower plant with a capacity of at least 80 MW by 1992. The commencement of the Cape Rodney Cocoa and Rubber Project, with exports to be transhipped in Port Moresby for export, will also be influenced by the development programme.

Although there was considerable pressure on Port Moresby from traffic bound for Ok Tedi, this has now declined, with volumes not expected to reach these levels again until 1990. Nonetheless, under the development scheme, Port Moresby can be provided with a reclaimed area behind the main wharf, and an additional berth to the four already existing giving berths 4 and 5 a total length of 390 metres.

Rehabilitation of Lae, as planned by the Board, includes improving and upgrading the area of pavement and reconstruction of Berth 2, refurbishment of Berth 1 including provision of a new fendering system, and reconstruction of the approach bridge at a cost of US\$500,000. Within 10 years, Lae is to have a container terminal, a separate petroleum facility, and a new break bulk facility.

At Alotau port on the northern shore, a natural harbour opened to the east, development earmarked includes providing berthing facilities for small coastal vessels which discharge copra, and an inexpensive marginal quay to the north of the coastal berth.

Bialla is getting an offshore loading jetty including a platform, two breasting and two mooring

dolphins suitable for handling of overseas palm oil tankers up to 30,000 tdw.

The Board also intends to carry out extension work on the present wharf at Kimbe as well as upgrade the facilities at Lorengau, Oro Bay, Vanimo and Wewak.

### 8.3 Cargo Handling

As in other developing countries, shipping in Papua New Guinea has been through the various phases of cargo handling technology, from manual work with hand carts to, among others, palleting and use of forklift trucks, as well as containerisation. Whereas in many other countries the changeover to new mechanical cargo-handling methods presented no problems due to an existing potential supply of qualified dockers, this has been a painstaking process in Papua New Guinea.

In the various main ports, one or two stevedoring companies are granted the necessary operating licences by the Harbours Board.

### 8.4 Shipyard and Repair Facilities

Papua New Guinea does not possess the necessary facilities and technical skill to maintain a first-class maintenance and repair service. Existing shipyards have almost no competition resulting in extremely high costs. Capacity and extent of drydocking facilities are very limited. The maximum capacity of existing shipyards is about 500 tdw. Ships above this size have to drydock in Australia.



## 8.5 Container Services

The general trend towards containerisation and, specifically, the containerisation of overseas shipping services trading to and from Papua New Guinea has inevitably resulted in a trend towards containerisation in certain sectors of the coastal trade. The major problem on the coast is the basic unsuitability of its vessels for carriage of ISO containers. But, despite many other problems with containerisation in coastal shipping, it is impossible to "turn back the clock" and withdraw ISO containers from the coastal trade.

The container service in Papua New Guinea suffers only from the fact that it was imposed too quickly, and the size of containers has become so varied. There is a definite requirement for containers and it is clear that, in order to obtain the most economic freight rates, containerisation is essential. The main problem is that containerisation is often interpreted to mean large ships with 20 foot containers. This is not necessarily so. Containerisation should be interpreted as unit loading with the use of ISO containers as well as pallets and small lifts. The main criteria is that the unit load can be handled by the cargo gear of the ships involved, that by using containers a faster turnaround of the vessels in ports is achieved, and that the containers are maintained in proper condition. Apart from speeding up of turnaround of the vessels, and thereby in due course, reducing the number of vessels on the coast, the cargo protection afforded by containers also assists in reducing pilferage and rain damage, and will reduce the amount of time lost, particularly in ports such as Lae, due to rain.

## 9. REGIONAL SHIPPING AND PORTS - AN OVERVIEW

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The Countries of the South Pacific Region, for the purpose of this discussion, includes Papua New Guinea, Cook Islands, Federated States of Micronesia, Fiji, Kiribati, Nauru, Niue, Solomon Islands, Tonga, Tuvalu, Vanuatu, Western Samoa, American Samoa, French Polynesia, Guam, Hawaii, Marshall Islands, New Caledonia, Northern Mariana Islands and Palau.

According to the Regional Transport Survey of the South Pacific, it has been established that:

- . The South Pacific region is mainly a service-taker insofar as international shipping services are concerned.

- . The level of general cargo imports into the region largely determines the nature and level of shipping services.

- . Import growth is forecasted to increase by 80% in the period 1982-1995.

- . Containerised cargo will grow at faster rates and become increasingly important.

The South Pacific region is provided a relatively high level of shipping services in relation to cargo volumes. Most of the region's 20 or so island states, have direct sailing links with their major markets in the United States, Japan, Europe or Australasia. Because overall import volumes and values far outweigh general cargo exports, meaning that sailings are more determined by import flows there are few shipping constraints on exports. Bulk commodities such as sugar and timber attract their own ships. Port charges are low enough to

warrant calls for even small cargo volumes. Since imports are expected to grow by 80% between 1982-1995, the region, although it will always offer only a marginal market by world standards, is not likely to be neglected.

The region is overwhelmingly a shipping service user and is expected to remain dependent on foreign shipowners. Of the four major regional shipping lines - Pacific Forum Line, Sofrano Unilines, Nauru Pacific Line and Warner Pacific Line - the acknowledged market leader is losing money. Another offers only irregular sailings while a third is overly dependent on its owner's skills and abilities. The shifting political balance within the region is at least raising questions about the continuation of some international services. Most of the regions port need upgrading. But if these could be rearranged even better services could result.

The South Pacific ought to offer extraordinary challenges to commercial shipping. 24 million square miles in extent, the sea to land ratio is in the order of 100:1. Papua New Guinea alone comprises around 80% of total regional area. With 12% of the world's surface area, the region supports less than 0.1% of world population. On a global scale, external trade values are tiny. Papua New Guinea, for example, did \$1,881 million worth of trade (imports plus exports) in 1982. Total value increased to just over \$2,000 million in 1985. But Fiji, the other major trader, achieved only \$800 million worth of business in 1982 and even less, \$670 million, in 1985. At the other end of the scale Tonga managed \$52 million in foreign trade, Tuvalu around \$3.0 million, Kiribati and Cook Islands \$24 and \$25 million respectively.

French, Japanese, United States, Australian and New Zealand carriers account for 70% of the roughly 100 vessels serving the region. They carry 85% of the cargoes.

28 ships belonging to regional lines share the remaining 15% of the trade. Domestic shipping between islands within a state is a separate activity altogether. Within external trade, international carriers are so prevalent because of French and US interests in French Polynesia and Micronesia respectively, plus Japanese and Australian proximity. With ships of all five flags criss-crossing the region, 16 of the 20 states have direct access to at least one major market.

The international carriers, sailing such long distances to reach the region, of course call at as many ports as possible on their way to and from their main target port. Typical international liner sailing patterns include the Bali Hai Line - Japan to 11 regional ports; the Bank Line - Europe to 9 regional ports; and PM&O-USA to eight regional ports. Only Kiribati, Tuvalu, the Cook Islands and Niue do not enjoy direct sailings.

Since international carriers are so important to the region, continued sailings must be encouraged through upgrading all of the regions ports to whatever standards are required to bring ship-stay and cargo handling costs to a minimum. This immediate step should be backed by continuous monitoring of shipping developments so that port costs, and hence 50% of cargo transport costs, could be kept to a minimum. If this strategy were to be adopted it would mean that virtually every port will need at least some improvement. The region's premier ports at Lae in Papua New Guinea and Suva in Fiji would require substantial improvement including containerisation. Since container traffic is expected to grow by 130% by 1995 to 320,000 TEUs - much faster than the overall import cargo 80% growth rate - premier ports may need gantry cranes and other equipment.

In general South Pacific ports are largely unequip-

ped for containers. The main shortcomings include weak wharf decks, not enough shore based container handling equipment and container stacking space, inadequate wharf protection and maintenance, shallow water at wharfs and alongside or over key reefs and bars, poor navigational aids, and not enough planning and trained staff to handle containers efficiently.

Most ports will need at least some new infrastructure and equipment for both break bulk and container traffic. Over the longer term, but beginning immediately, much more attention should be paid to training at all levels at sea and on shore. Training would aim to streamline port operations and management. Port pricing and auditing systems need to be overhauled. New port infrastructure and equipment, apart from correctly specified and procured, would have to be properly maintained if least-cost port operations are to be achieved.

It would be interesting to note that the two ports in Papua New Guinea and Fiji could clearly serve as regional transshipment centres. This idea may be rejected on the basis that each state should have equal access to the outside world through direct sailings. While this is obviously a politically safe approach, it would be interesting to see whether commercial shipping pressures will permit it. If not, then regular scheduled feeder services from other states to Suva in Fiji and Lae in Papua New Guinea (to serve Australia and Singapore perhaps) may emerge.

## 10. THE SOUTH PACIFIC UNIFORM MARITIME STANDARDS CODE (SPUMS)

### 10.1 Introduction

Papua New Guinea being the largest country (apart from Australia and New Zealand) in the South Pacific Region in terms of area, population and economy is a leading and very active member of the South Pacific Forum - a gathering of the Heads of Governments of the independent and self-governing countries of the South Pacific. The Forum held its first meeting in Wellington, New Zealand in August 1971. At its second meeting in Canberra in February 1972 firm proposals for a "Trade Bureau" were considered and the South Pacific Bureau for Economic Co-operation (SPEC) was established. SPEC, as the Bureau is more commonly known, is located in Suva, Fiji.

### 10.2 Membership

The formal agreement establishing SPEC was signed in Apia, Western Samoa on 17th April, 1973 by the Governments of Australia, Cook Islands, Fiji, New Zealand, Tonga, and Western Samoa. Other countries that have joined since then are Niue, Papua New Guinea, Kiribati, Solomon Islands, Tuvalu, Federated States of Micronesia, and Vanuatu. While SPEC does have a formal membership, it was not designed to create exclusive benefits for those members alone. It has always been the expressed wish of the Forum that SPEC should be available to help other Pacific Island Territories, and thus promote the interests of the region as a whole.

### 10.3 Functions

The Agreement establishing SPEC states that the purpose of the Bureau is to facilitate continuing co-operation and consultation between members on trade, economic development, transport, tourism and other related matters. With this broad mandate the following functions are included :

- . To identify opportunities for the modification of trade patterns, bearing in mind the objectives of regional trade expansion ;
- . To investigate ways in which industrial and other development could be rationalised, using the concept of regional enterprise ;
- . To look at the scope for free trade among the Island member countries ;
- . To establish an advisory service on sources of technical assistance, aid and investment finance ; and
- . To help co-ordinate action on regional transport.

### 10.4 Regional Shipping Transport

Regional Shipping Transport is an important part of SPEC's activities. The assignment to SPEC in 1972 of the task of studying the financial and operational structure of a regional shipping line reflected the priority island leaders attach to the concept, and to linkage between trade and transport in the South Pacific Region. As a result the Regional Shipping Council and its Advisory Board was formed in 1974 and in 1976 the Forum endorsed the formation of the Pacific Forum Line (PFL) as a regional shipping venture. The documents establishing the line were finalised in 1977 and the line currently operates

between Australia, New Zealand and the Pacific Islands.

#### 10.5 Maritime Training Facilities In The Pacific Region

With the general idea of regional co-operation in mind, the South Pacific Uniform Maritime Standards Code was formulated under the auspices of SPEC. The first meeting of the Advisory Committee on Uniform Maritime Standards held in Honiara, Solomon Islands in 1978, supported the concept of national training centres co-ordinating their training programmes both in terms of syllabuses and in the courses offered, to make the best use of expensive facilities and to avoid unnecessary duplication and overlap. Overall the efforts of the centres should be aimed at providing not only for the national, but also for regional needs.

The Committee also decided on recommending the acceptance of Uniform Maritime Standards creating a favourable climate for rationalising training facilities in the region.

Because of the dispersed nature of the region and the advantages of training students in, or near their own countries, it was accepted that the region could probably support all the existing institutions training the lower and middle levels. However, because of the cost of training facilities for the higher grades, it was considered that there is scope for rationalisation of the training facilities within the region at these levels. It was also considered that the existing training facilities should be regarded as constituting the regional maritime training facilities. If necessary, national institutions should be modified to ensure that region training needs are fully met.

The maritime training institutions available in the



Pacific Region are :

- Papua New Guinea : PNG Maritime College, Madang.
- Fiji : School of Maritime Studies as part of the Fiji Institute of Technology, Suva.
- Solomon Islands : Marine Training School, as part of Honiara Technical Institute, Honiara.
- Kiribati : Maritime Training School, Betio.
- Tuvalu : Tuvalu Marine School, Amatuku.
- Western Samoa : Marine Training School, Apia.

The Uniform Maritime Standards (UMS) Committee again in 1983, recommended the establishment of Regional Training Centres :

- that formal agreement is reached between the governments of Papua New Guinea, Fiji, Solomon Islands on the one hand, and individual SPÉC member countries on the other hand, that the three named countries provide training and examination facilities on a regional basis to other countries wishing to participate ; that the other countries do not compete by attempting to establish their own regional training or examination facilities, nor issue their own "Regional" Certificates of Competency outside any agreement with the officially named Regional Examination Centres ;

- that the training courses for regional students

are provided at the three Regional Centres, to an approved Regional Standard ; including the following appropriate supplementary courses :

- Papua New Guinea : Grade 5-4 Master  
Grade 5-4 Engineer
  
- Solomon Islands : Grade 5-4 Master  
Grade 4,3 and 2 Engineer  
Marine Engineer Apprentice /  
Cadet leading to Grade 3  
Engineer
  
- Fiji : Grade 5-4-3 and 2 Master  
Grade 5-4-3 and 2 Engineer  
Deck Cadet leading to Grade 4  
Deck Officer.  
Engineer Cadet leading to Grade  
3 Engineer.

#### 10.6 Regional Examination Centres

The fifth meeting of the Advisory Committee on Uniform Maritime Standards in Betio, Kiribati outlined the need for maintaining the integrity of maritime examining authorities in the Pacific Region.

A Pacific Region Certificate Structure has been established ; it is important that standards be maintained and certificates be accepted throughout the region and beyond. Control should be exercised by limiting the number of examination centres. This also would be more economical as the provision of facilities for examination is very costly.

The three centres in the Region at present : Papua

New Guinea, Fiji and Solomon Islands provide training for Grade 4 level or above. It was then proposed that examination for Pacific Regional Certificates be concentrated in those three countries.

Agreement has been reached by the three countries and acceptance given by the other Pacific Island countries to forego the provision at their Maritime Training Centres of examination at Grade 4 level and above. Examinations would still be conducted in the home country where a lower certificate level of competency is required.

The Committee agreed to make recommendations to the Regional Shipping Council :

- to establish formal agreement with the Maritime Training Institutions and Examination Centres in Papua New Guinea, Fiji and Solomon Islands by which these Institutions/Centres would provide courses and examinations for Certificates of Competency for Grade 4 and above, for other Pacific Island countries.

- to establish formal agreement with other Pacific Island countries wishing to send their candidates to those regional training and examination centres.

The Tenth Regional Shipping Council meeting accepted the UMS Committee's recommendations for a formal agreement among member countries to establish a regional and examination system. To this effect a Memorandum Of Understanding (MOU) has been signed by most of the member countries including Papua New Guinea. ANNEX 3 presents a sample of the Memorandum Of Understanding.

#### Approved Regional Training Institutions

- PNG Maritime College : Madang, Papua New Guinea
- School of Maritime Studies : Suva, Fiji

- Honiara Technical Institute : Solomon Islands

Approved Regional Examination Centres  
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- Marine Division : Department of Transport  
Papua New Guinea
- Marine Department : Ministry of Transport and  
Works - Fiji
- Marine Department : Honiara - Solomon Islands

The Regional Examination Centres undertake to :

1. guarantee examination services being regularly available to suit the timing and level of courses being conducted at Regional Training Centres ;

2. maintain adequate staffing by properly qualified staff according to the minimum standards approved by the Advisory Committee on Uniform Maritime Standards ;

3. facilitate secondment of staff to or from other Regional Examination Centres in emergency situations ;

4. liaise with other Regional Examination Centres in order to :

- maintain and upgrade the standards and efficiency of each institution ;
- share the Regional Examination Question Bank and maintain its security ; and
- maintain the integrity of the regional examination system.

5. provide, for an economic fee, examination services at Grade 5 level in countries not possessing examination facilities where sufficient candidates make this economic

mically viable.

The South Pacific Uniform Maritime Standards Code is intended to cover the requirements of International Conventions particularly the STCW 1978 and at the same time provide a realistic standard of operations and manning acceptable to all participating countries in the region.

The Code is not intended to be a legal document, but is intended to provide a set of minimum technical standards which can be used by the countries of the Pacific Region as a basis for their national maritime legislation. Member Governments are however, quite free to adopt higher standards and more stringent requirements in their national legislation if they so desire.

International Maritime Conventions taken into consideration in the formulation of the Code are :

- International Convention for the Safety Of Life At Sea, 1974 (SOLAS 1974) plus 1978 Protocol and Amendments ;
- International Convention on Load Line, 1966 (LL 1966) ;
- Regulations for Preventing Collision at Sea, 1972 (COLREG 1972) ;
- International Convention on Tonnage Measurement of Ships, 1969 (Tonnage 1969) ; and
- International Convention on Standards of Training, Certification and Watchkeeping, 1978 (STCW 1978).

Papua New Guinea is party to the above Conventions.

## 11. PROBLEMS ASSOCIATED WITH COASTAL SHIPPING IN PAPUA NEW GUINEA

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### 11.1 Freight Tariffs

The freight rate system is obviously based only on the transport traffic between the mainports and does not take into consideration the cargo volume and transport within the zones and within the various provinces. Independent of the actual distances between the distance zones, the highest rates of the respective zones are charged.

The relatively high freight rates are without doubt largely caused by the problems with which Papua New Guinea coastal shipping is faced. These are:

- a partially uneconomical coastal fleet, caused by bad maintenance, lack of spare parts and age of vessels.
- very difficult navigational conditions along the coast and on the rivers of Papua New Guinea, with navigational aids which do not yet allow day and night sailing in all areas, as well as frequent delays in the loading and discharging of cargo due to prolonged rainfall.
- slow turnaround of containers.
- relatively high repair costs due to limited capacity and lack of competition in the shipyard and repair sector.
- high stevedoring costs and in cases low productivity of dock labour force.
- inadequate level of crew training and frequent lack of discipline on board.
- frequent lack of understanding shown by the Labour Union in the problems concerning the general

interest of coastal shipping in Papua New Guinea.

## 11.2 Documentation

All cargo carried on the coast is shipped on liner Bills of Lading. This is a negotiable document and is governed by the terms, provisions and conditions of the Papua New Guinea Sea Carriage of Goods Act (Chapter 261) which broadly speaking, is based on the equivalent Australian legislation.

One of the "golden rules" when dealing with a Bill of Lading is that the original Bill of Lading must be surrendered to the carrier, duly endorsed by the consignee, before the goods can be released at the arrival port. This is where coastal operators face a major problem, - mainly due to the slow, or non-existent communication with outlying villages and ports.

Most shippers are reluctant to place the original Bill of Lading in the vessels mail bag, and the inevitable result (especially on feeder services) is that the vessel arrives at its destination before the original Bill of Lading turns up.

A practice whereby goods are delivered against a signature on a delivery docket, or on a copy of the Bill of Lading, has therefore developed on the coast. In general this has worked satisfactorily. However, if, for some reason, a case arises where a shipper or consignee suffers a major loss through wrong delivery of cargo there is little doubt that the carrier would be claimed responsible. This wrong delivery could occur because the cargo has been sold while afloat between port of shipment and destination or a shipper withholds the original Bill of Lading because of non-payment of an invoice.

### 11.3 Personnel

The personnel situation can also be cited as a weak point, with regard to qualification, manpower and productivity. The training and practical skills of personnel with a few exceptions are well below the requirements of the coastal shipping trade. Productivity is often inadequate and crew discipline often unsatisfactory. A reason often cited is a lax implementation of the disciplinary laws partly due to lack of necessary qualified personnel within the Department of Transport.

Crew costs form a large proportion of vessel operating costs. The Government through its manning scales, determine the numbers, and gradings of the officers and seamen on board all vessels covered by the Merchant Shipping Act and Regulations. Requirements are determined by the length of the vessel for deck crew, and power of the main engines for engine crew.

Early implementation of the Regulation was found to be impossible as there were insufficient seamen available, both deck and engine, with required qualifications. Exemptions for certain vessels to carry lesser qualified crewmen were common place. This is not so now on the deck side as the Papua New Guinea Maritime College in Madang has produced many senior officers up to and including PNG Master (Grade 5) over the past ten years. Unfortunately this increase in qualified crewmen has not been so noticeable in the ranks of ships engineers, and the industry is still suffering from a critical shortage. Graduate recruitment into the training ranks of Masters and Engineers is unlikely to occur in Papua New Guinea (as the industry is not glamorous enough), and thus the overall shortage will continue for a long time, especially with engineers. There is no obvious solution to it.



The interest of all seamen are represented, together with those of dockers, in a single national union (PNG Waterside Workers and Seamen's Union). This alliance causes continual problems for the coastal shipping trade since in the event of strikes, for differing demands, both labour groups are involved.

#### 11.4 Coastal Trade Licences

The Coastal Trade Licence has proved to be inadequate in achieving the proposed objectives is clearly demonstrated by the incident of the overtonnage situation which currently prevails in some sectors of the coastal trade. There are two possible explanations for the failure of the system to produce the desired result:

- Firstly the recommendations of the Coasting Trade Committee is not and have not necessarily been accepted by the Minister for Transport whose prerogative it is to grant and to reject applications for Coastal Licences. While it is not the intention here to challenge a Ministerial decision, this obviously raises the question as to whether there is any point in maintaining the Coasting Trade Committee in its present role, if its recommendations are not acceptable to the Minister.
- Secondly, the coastal shipowners (despite having a Coastal Shipowners Association) themselves have been remiss in failing to adopt unified and concerted approach to the problems created by overtonnaging in the coastal trade. On the one hand the coastal shipowners are apparently determined that coastal trade should be protected by licensing regulations from foreign flag incursions, and yet on the other hand they pursue their individual aims

and objectives in such a manner that the very problems from which they seek protection against overseas shipowners is created from within their own ranks.

#### 11.5 Merchant Shipping (Safety) Regulations 1976

The Marine Division of the Department of Transport is responsible for the implementation of the Shipping Safety Regulations 1976.

The responsibilities relating to ship safety are so extensive that the Division, due to the prevailing situation in coastal shipping and the limited number of qualified personnel at its disposal, is unable at present to fulfil these responsibilities to the satisfaction of all concerned. The Division is fully occupied with the rigorous implementation of the existing Shipping Safety Regulations alone, quite apart from its extensive duties in other areas.

#### 11.6 Harbours Board Facilities And Private Wharfs

The Harbours Board is responsible for the issuing of licences to the stevedoring companies operating in the harbours. Cargo is handled on the wharfs and jetties, warehouses and transit sheds, where the loading and discharging of mainly company vessels as well as the storage and distribution of cargo is effected. These companies are naturally at a considerable advantage compared to those whose vessels (due to their size or for other reasons) must use Harbours Board facilities.

There are a number of areas in which shipowners using the private wharfs can gain a competitive advantage over those using the wharfs of the Harbours Board. For example the private wharfs offer the facility of conti-

nuous receiving of cargo whereas the Harbours Board will only accept cargo seven days prior to the vessel's arrival. The private wharfs do not charge storage on inbound cargo whereas the Harbours Board allows inbound cargo only one free day before storage charges are incurred. Under Harbours Board regulations only licenced stevedores may operate at their berths whereas no restrictions apply on the private wharfs.

These differences in philosophy and operation provide a clear incentive for coastal shipowners to avoid using Harbours Board facilities wherever practicable. Whilst accepting that the Harbours Board has a whole area of responsibilities which is radically different to those of the private wharf operators, the question is whether the national interest is best served by this situation.

The shipping companies with their own cargo-handling facilities are at an economic advantage over those obliged to use the costly Harbours Board installations. It is understood that the Papua New Guinea Harbours Board has considered offering further concessions to coastal ships. This is a welcome move, although unless coastal ships are given some form of priority, private wharfs will always prove more competitive.

## 12. RECOMMENDATIONS FOR THE IMPROVEMENT OF COASTAL SHIPPING IN PAPUA NEW GUINEA

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### 12.1 Freight Tariffs

The current fixed freight rates do not meet the requirements of those concerned.

It can be generally said that the present system for fixing freight rates is inadequate from the point of view both of the shipowners and the Ministry of Transport which acts as the guardian of shippers' and consumers' interests. In any trade where there is virtually no competition, and especially in a domestic trade involving the provision of essential national transportation services; there is an obligation on the part of the shipowners as well as government to ensure that the public interest is not prejudiced by unilateral determination and application of freight rates. The existing system in Papua New Guinea, however, falls short of meeting the basic criteria necessary to protect both the legitimate interests of shipowners and those of their customers, and last but not least the consumers' interests.

Freight rates within and between zones should be calculated according to the distances between the harbours concerned, plus harbour dues and cargo handling costs (liner term rates) whereby particular navigational difficulties (e.g. along the Fly and Sepik Rivers) and meteorological influences should be taken into consideration.

The calculation of the freight rates corresponding to the new situation should be based on the data of the viable shipping companies, whereby complete records of income from cargo transport and costs incurred for vessels and installations should be available for examina-

tion and a reasonable profit margin allowed for.

## 12.2 Personnel

The Papua New Guinea Maritime College in Madang has so far successfully fulfilled a very valuable educational function and deserve full acknowledgement. Good training of crew members is of prime importance for viability and safety in the country's coastal shipping. The Maritime College therefore should continue to receive every possible support from the Government and the shipping companies in order to guarantee the best possible training of crew members.

It is not the intention here to comment in detail upon the training curriculum of the Papua New Guinea Maritime College, but it must be noted that this curriculum could be more practically oriented in various sectors, especially that of Papua New Guinea coastal shipping. Attention is drawn to the unnecessarily high costs arising from the inability of technically qualified personnel to carry out the simplest repair work on board. The high costs incurred by downtime and recourse to repair firms could to a larger extent be avoided.

The shipping companies should, however, in their own interests, cater for the training and further qualification of personnel (as already practiced by a few companies), since it would be beyond the capacity of the PNG Maritime College alone to meet the requirements of all parties for a high standard of training. To improve the training offered at the Maritime College, the financial support given by government should be substantially increased. This would remove the persisting deficit in teaching staff and material. The operating costs arising from the use of technical personnel in coastal shipping

could be reduced by bringing the practical pre-training (adequate length of apprenticeship), the training at the Maritime College and further training within the shipping companies all into line with the requirements of the coastal shipping trade. Above all, more importance could be attached to practical skills (e.g. the execution of simple repairs on board) rather than unnecessary theoretical knowledge. Discipline on board should be improved, where necessary, through strict enforcement of the disciplinary laws.

### 12.3 Coasting Trades Committee

The main responsibilities of the Coasting Trades Committee should have the following objectives:

1. To monitor the Coastal Shipping Trade and to ensure that adequate shipping services are provided to serve the needs of the nation and population.
2. To ensure that suitable types of vessels are introduced in the coasting trade with due regard to the changing trend in the types and volume of cargo to be shipped.
3. To control and regulate the issue of Coasting Trade Licences so as to ensure that adequate tonnage is on the coast to serve the needs of the trade but to avoid an overtonnage situation.
4. To ensure that the standard of both passenger and cargo services are improved.
5. To ensure that there is a balance between the standard of service provided and their costs.

6. To monitor the operation of shipping operators to ensure that all conditions of regulations, safety at sea, and operation of the Trading Licences are observed.

7. To ensure that fare and freight rate structures are reasonable and fair for the parties concerned, such as shippers, shipowners and consumers.

The interests of consumers should be adequately represented. The Coasting Trades Committee should be able to give recommendations along clear and adequate guidelines.

#### 12.4 Coastal Trade Licences

If any system of licensing is to work effectively, it must be administered in such a way as to ensure that a proper balance can be maintained between demand and supply for coastal shipping services. Shipowners themselves should be perfectly capable of achieving such a balance within the framework of the existing regulations and it would not be unreasonable for the Minister for Transport to request them to do so. In addition to the foregoing, the following points regarding the granting of licences should be considered:

- Efficient use of tonnage should be the paramount criterion in the granting of additional licences. This would have a definite tendency to stabilise freight rates throughout the coastal shipping industry, to minimise damage, pilfering and loss of cargo and, in general, to encourage the operator to maintain a more frequent service.

- The introduction of vessels more suited, in design and tonnage, to meet the demands of the shippers. This allows more efficient operation and consequently an income return which justifies the capital outlay for a new vessel as against old imported vessels.
- Priority should be given to granting licences for an acceptable size (tonnage) of ship, which allows economical and profitable operation on a regular basis.
- Licences for new tonnage should be given only where there is a clear case of under-tonnage in a particular region of trade, and where specialised types of vessels are required to provide particular services.
- Shipping operators who are prepared to invest huge amounts of capital on new vessels to improve services and to stabilise costs should be given priority and protection for trading areas and routes.
- Licences for replacement tonnage should be given on a tonnage to tonnage basis (within certain limits) with due regard to be given to the economic viability of the shipping industry.

## 12.5 Coastal Shipping Regulations

With the exception of a few regulations which, due to the changing situation in Papua New Guinea, should be changed to meet present day demands; basic changes in the laws are not necessary. The main problem lies in their interpretation and enforcement. Some short-term and medium-term measures which should be considered are:



- Recruitment of additional qualified personnel by the Department of Transport for the improved enforcement of existing laws.
- Some re-writing of loosely worded paragraphs - those open to misinterpretation can be set in hand to help alleviate this problem.
- Detailed analysis of the Safety Regulations to be carried out by a committee consisting of representatives of the Department of Transport, Shipowners' Association, Justice Department and an independent shipping expert in order to improve regulations concerning construction, safety on board, equipment covered by SOLAS Regulations, Navigational aids, to update the Articles of Agreement, etc.

The Articles of Agreement used at present urgently require updating. New Articles of Agreement should contain as an appendix the most important disciplinary laws in a form which can be easily understood by the crew and in the languages most commonly used. At certain intervals, these Articles are to be reviewed and revised by an official of the Department of Transport.

#### 12.6 Repair And Maintenance, And Ship Stores

Repair and maintenance and ship stores, form a large proportion of annual running costs in Papua New Guinea. The lack of spare parts and preventive maintenance (mainly due to unqualified crews) and the high cost of slipping and survey continually force operators to try and cut corners where possible in order to keep their ships

at sea. This, of course, is counter-productive.

Standardisation in equipment is an obvious way to cut costs, in that stocks of spares can be kept to hand (instead of waiting for delivery, usually by airmail and often from Europe). Some operators have managed to achieve standardisation within their own fleets, but the industry itself has yet to move in this direction in anything but possibly some types of electronic equipment.

The cost of living is high in Papua New Guinea and thus foodstuffs, and other stores, comprise a significant proportion of running costs. It is felt that companies could possibly form some form of small scale purchasing consortium (in the same manner as the very much larger IMPA or International Marine Purchasing Consortium in the United Kingdom or INCENTRA in Norway) where long term negotiations with suppliers can possibly reap the benefits of good discount rates.

The period a coastal ship spends in dock for repairs, maintenance and fitting should be kept to a minimum. The following measures could serve as a guideline towards achieving this:

1. Preventive maintenance should be considered as an absolute must for a vessel.
2. All possible maintenance work should be carried out on board. The technical condition of the ship and equipment should be recorded.
3. Maintenance and repairs must be carried out as soon as damage or problems arise.
4. Records must be kept to give a better view of what has been done and what has to be done over a certain

period of time (planning and execution).

5. At certain intervals the ship's officers should prepare a log of all the various normal maintenance carried out, together with irregularities, such as stops, breakdowns etc.

6. Shipowners technical staff should record all information regarding maintenance, overhauling and repairs in a follow-up file. It is important that the files both on board and in the office are always kept up to date.

## 12.7 Cargo Handling

It is debatable whether the unusually high stevedoring costs, reflected in high freight rates, could be lowered by increased competition. The latter, however, is not encouraged by the present restricted issue of licences to cargo handling companies.

For the following reasons, however, the abolition of the existing licence system is not to be recommended:

1. Modern cargo handling methods require very high investment in technical equipment and installations.

2. A large, qualified labour force, which can only be created after several years of intensive training, is needed for optimal cargo handling and operation of the versatile, highly technical equipment and installations.

3. The relatively low cargo volumes handled in various harbours cannot be economically divided among a number of stevedoring companies.

The end result would doubtless be a qualitative and quantitative deterioration in cargo handling efficiency, with no reduction in costs.

The operations of the Harbours Board, and the interactions of the Price Controllers and the stevedoring companies need closer monitoring for the impact their charges make on the overall costs of moving freight along the coast. The Minister needs to be fully briefed on the views of the Department of Transport on the level of charges so that a wider costing strategy is presented through him to the Harbours Board. The Board should be encouraged to ensure that the limited number of stevedoring licences and contracts that are issued at their harbours are constantly commercially tested by being awarded against open tendering at the time of contract renewals.

#### 12.8 Proposed Policy Guidelines

Following proposed policies which are within the framework of the Merchant Shipping (Coasting Trade) Act should serve as a guideline when considerations of applications for coastal trade, are considered.

1. Principal policy should be that under any circumstances, foremost consideration is to be given to the interest and benefit of Papua New Guinea as a whole before individual interests. Further more, decisions should be consistent with the specific policies stated below.

a) A regular scheduled liner service must be efficiently maintained between mainports.

b) A monopoly situation must not be allowed in the mainport trade.

c) Freight rates must be ascertained on the basis of an efficient operator with suitable economical vessels.

The people of Papua New Guinea should not be expected to pay for the operation of unsuitable unnecessary and expensive vessels.

d) In the feeder service, where ships operation are less complex and financially less demanding, preference must be given to applications from local business groups.

e) Applications from Non-national operators must be accompanied with convincing evidence that best efforts are made to train nationals on their ship.

f) Operators which fail to comply with conditions laid upon their licences, or the Merchant Shipping Act are to be prosecuted in accordance with the Act. In cases of repeated breaches of the Act cancellation of a trading licence should be seriously considered.

2. Following specific policies to apply for replacement vessels.

a) Replacement to be on a tonne for tonne basis.

b) The vessels to be replaced must be disposed of to interests outside Papua New Guinea or alternatively permanently laid up in Papua New Guinea.

c) Replacement vessels must not exceed ten years.

Although some of these policies are in existence today in Papua New Guinea it is felt necessary to point them out again as these have been continually violated by some shipping companies. In some instances there has been political interference in the coastal shipping industry which has made implementation of policies difficult.

In the interest of an efficient coastal shipping in Papua New Guinea it is necessary that there be good dialogue between the three main parties in coastal shipping operations. A coastal shipping forum should regularly be hosted by Government in which there be equal representa-

tion of the three interested parties:

- the Government
- the Shipowners Association
- the Shippers Council

In executing its policies the Government (Department of Transport) should show a preference to dealing formally with the Association and Council rather than with specific private business.

Coastal Shipping is a relatively large industry in Papua New Guinea with some 200 commercial vessels moving 470,000 revenue tons.

When overseas vessels were no longer allowed to carry coastal cargo around Papua New Guinea, as from the mid 1960's there has been a steady growth in the numbers and types of coastal vessels. This culminated in an unprecedented new building programme during the late 1970's/early 1980's when several million Kina was spent by four major operators to upgrade their coastal fleet.

With modern, reasonably sophisticated fleet, the coastal industry still suffers problems from increasing high running costs, price controlled freight rates, and a general levelling off of coastal cargo. Import substitution will continue but probably at a much lower rate. Cement could well be shipped in bulk in Papua New Guinea, bagged, palletized and distributed around the country by coastal vessels. There may be a possibility in the fairly long term future if Papua New Guinea becomes self sufficient in rice, that this staple food will no longer be imported, thus coastal shipping will again benefit.

Government legislation restricts most vessels to certain routes thus ensuring that routes are not overtonnaged allowing for a reasonably profitable operation. Government legislation regarding the Safety and Survey requirements of all vessels over 10 metres in length has been slightly amended to assist those vessels less than 15 metres. The Coasting Trades Committee as the body responsible for making recommendations to the Minister on the issuance of coasting trade licences has been a subject of criticism in the past. The most common

criticism has been the fact that three members of the Coasting Trades Committee are from the shipowners and this may cast some doubts as to the possibility of others entering the industry or that competition from other owners is being limited. It is the writer's opinion that the structure of the Committee was deliberately designed to have equal balance between representatives of the consumers of the shipping services provided on the coast and the representatives of the providers of the shipping service who are licensed operators. Neither hold a majority. The Departmental officer as Chairman could effectively sway the proceedings and because of his position as a Departmental Officer and therefore an adviser to the Minister he could also advise the Minister on the calibre and the performance of the persons appointed as members and their suitability to serve on the Committee.

By his powers of appointment (and therefore of dismissal) under Subsection (2) the Minister has adequate control of any members who appears to be using his position on the Committee to his own advantage

90% of Papua New Guinea's foreign trade is carried in foreign flag vessels. This is expected to continue for a long time yet until Papua New Guinea reach a stage of development whereby she can be able to participate meaningfully in overseas shipping. It is up to the government to consider the various shipping options which are available and formulate its shipping policies accordingly. In the meantime, in order to be able to get favourable terms of shipping services it is important for Papua New Guinea to have a strong and effective shippers council backed up by an efficient Freight Study Bureau staffed by experienced and properly trained people. The



need for very close co-operation between these two organisations is very important in dealing with shipping conferences operating to and from Papua New Guinea.

The question that has been asked before in Papua New Guinea and elsewhere is who then, among the various interests on the side of the shippers, is in a position to take necessary action? In some developed countries - most notably in Western Europe - the shippers themselves have taken much of the action needed to protect shipper interests, by forming shippers' councils and establishing consultation procedures. In some developed countries the initiative has come from the producers of export goods. However, in developing countries the situation is somewhat different: governments cannot rely upon either their shippers or their producers to take necessary action, and must take the initiative themselves, both in setting up shippers' councils and in ensuring that the procedures lead to the desired results. Further, in developing countries, only the governments are in a position to take the necessary over-all view of the situation. Shipowners are basically concerned with moving goods from the wharf in one country to the wharf in another, but a government is concerned with the efficiency and economy with the total operation from producer to consumer; it is concerned with the effects of rates on consumers and returns to producers - and not merely with the effect upon the flow of trade; it is concerned not merely with the cost of shipping, but with the effect upon its balance of payments, and with the possibilities of saving or earning foreign exchange by the use of national merchant marines.

Shipping questions have many facets: the difficulty is that in taking action to solve one problem a government may create or accentuate another. It is therefore necessary to understand the over-all nature of

shipping problems and to appreciate the fact that problems relating to shipping services are inseparable from problems relating to ports.

One of the Government's policy objectives is to extend Papua New Guinea's involvement in overseas shipping and trade. To this end the Overseas Trade (Shipping) Act was enacted in 1982, providing greater participation of PNG vessels to enter the outward liner trade. This could be done through the government participating in joint ventures with foreign shipping companies.

Regional co-operation by way of pooling resources, manpower and equipment is an obvious way of cutting costs. In the South Pacific Region, Papua New Guinea co-operates with other Pacific countries in Maritime Training, port development, environment protection and shipping in general. This spirit of co-operation has existed for a long time and with regional co-operation mutual benefits can be gained which in the long run will benefit all participating island states including Papua New Guinea.

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ANNEX 1

LISTS OF VESSELS CURRENTLY REGISTERED IN PNG

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
ALBERT & RUTH MUNT P.O. BOX 40 BWAGOIA MILNE BAY PROVINCE	LABA	15.61	WOOD CARGO
ANTON LEE TRANSPORT PTY LTD P.O. BOX 226 PORT MORESBY	NIUGINI COAST	60.01	STEEL CARGO
ALOTAU STEVEDORING & TRANSPORT P/L P.O. BOX 28 ALOTAU	LIBBY	11.7	WOOD CARGO
ARCHDIOCESE OF RABAU P.O. BOX 1237 RABAU	ST. TERESA	25.22	WOOD CARGO
	KLAUS	11.65	WOOD CARGO
	SCHALLER	11.31	WOOD CARGO
	HUTH	11.63	WOOD CARGO
PRABI ENTERPRISE PTY. LTD. PRIVATE MAIL BAG KARKAR ISLAND MADANG	SAPPHIRE	11.35	WOOD CARGO
	MANSIP	12.80	WOOD CARGO
BISMARCK INDUSTRIES PTY LTD P.O. BOX 430 RABAU	GOLD PINE	14.35	STEEL TUG
BULK TRANSPORTATION PNG LTD P.O. BOX 689 PORT MORESBY	PACIFIC VOYAGER	61.81	STEEL TANKER
	PACIFIC ATLAS	22.79	STEEL TUG
BURNS PHILP (PNG) LTD P.O. BOX 75 PORT MORESBY	BP I	45.74	STEEL BARGE
	BURSEA	35.96	STEEL DRY CARGO
	BURWAVE	35.96	" " " "
	BURCREST	35.96	" " " "
	KURWINA	29.38	STEEL CARGO
	NIUGINI TRADER	29.18	STEEL CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
CATHOLIC DIOCESE OF ALOTAU P.O. BOX 105 ALOTAU	BONAVENTURE CAMILLO LOULA MORNING STAR	11.78 11.47 14.03	WOOD CARGO WOOD CARGO WOOD CARGO
COASTAL SHIPPING P/L P.O. BOX 423 RABAU	HURIS BRITT ANN GLOMARIS COSMARIS BEAUMARIS	34.41 52.25 37.99 35.24 35.17	STEEL CARGO " " " " " " TRANSVERSE FRAMED CARGO SHIP OF LAND- ING GRAFT TYP
CO-OPERATIVE WHOLE SALE P/L P.O. BOX 606 LAE	MAKAWA	13.00	WOOD CARGO
GRAEME CARSON FLAD ISLAND PLANTATION P.O. BOX 2033 RABAU	GOVILLON II	16.64	WOOD CARGO
KANAI SHIPPING SERVICES P/L P.O. BOX 499 WEWAK	DANGIT	23.62	STEEL CARGO
KOY CONSTRUCTIONS P/L P.O. BOX 44 POPONDETTA	KCB 2	24.07	STEEL DUMB BARGE
KAMBANG HOLDINGS LIMITED P.O. BOX 789 MADANG	MAKAYA MADANG COAST UMBOI NAGADA TOTOL MALALO SUNGU SIMBANG MAMOSE EXPRESS MANEBA	29.91 60.01 42.20 29.22 29.95 29.33 18.95 19.94 34.85 39.71	STEEL CARGO STEEL CARGO " " " " " " " " " " " " STEEL PASSENGE STEEL CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
MANUS PROVINCIAL GOVERNMENT P.O. BOX 190 LORENGAU	TAWI	19.95	STEEL CARGO
MELANESIAN TOURIST SERVICES P/L P.O. BOX 707 MADANG	MELANESIAN EXPLORER	38.45	STEEL PASSENGER
REHEAD SHIPPING PTY LTD P.O. BOX 1908 LAE	SEPIK PRIDE	10.56	GLASS REINFORCED PLASTIC CARGO.
	WITBRIDGE	79.25	STEEL ROLL ON ROLL OFF.
	SAN FRANCISCO	68.8	TRANSVERSELY FRAMED CARGO-SHIP.
	HUON GULF	44.25	STEEL RORO CARGO VESSEL.
	LADY JANE	52.37	STEEL TANKER
	LADY JENNY	38.89	" "
	LADY JUDITH	41.94	" "
	LADY ANNE	45.85	" "
NORTH SOLOMONS PROVINCIAL GOVT. P.O. BOX 120 ARAWA	ATOLLS ENTERPRISE	26.31	STEEL CARGO
MAUWA ENTERPRISE P/L P.O. BOX 198 ALOTAU	BRAAK	14.30	WOOD FISHING VESSEL.
	ANGLER	11.27	WOOD CARGO
PACIFIC TOWING (PNG) P/L P.O. BOX 701 PORT MORESBY	JASHILL	18.28	STEEL TUG
	PACIFIC SALVOR	22.79	" "
	TARALGA	16.23	" "
	KAHAYAN I	49.53	STEEL DUMB BARGE.
	PACIFIC GULF	19.9	STEEL TUG
	LIBY II	11.40	WOODEN WORK BOAT.
	WALLACIA	19.54	STEEL TUG



OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
PARISH OF LIHIR ISLAND INC. P.O. NAMATANAI NEW IRELAND PROVINCE	ST. ROBERT	11.61	WOOD CARGO
PACIFIC NEW GUINEA LINE P/L P.O. BOX 1764 RABAU	KAUM	22.61	STEEL PASSENGER
	KRIS	42.01	STEEL CAR FERRY
	SALAMANDER	22.62	" CARGO
	KAZI	32.58	" PASSENGER VESSEL.
	DOLPHIN II	12.78	WOOD TUG
	KARLOCK	36.91	STEEL TUG
POROMAN SHIPPING PTY LTD. P.O. BOX 486 MADANG	DOILON	35.40	STEEL CARGO
	DEANEL	26.10	" "
PNG BANKING CORPORATION P.O. BOX 78 PORT MORESBY	NAMBAWAN	12.76	GROUP EDUCATIONAL LAUNCH
PNG HARBOURS BOARD P.O. BOX 671 PORT MORESBY	BOROKO	14.30	STEEL CARGO
	NAKANAI	10.97	GRP PILOT LAUNCH.
	DOVIN	15.40	GRP " " "
	MUSANGU	10.97	" " " "
PNG SHIPPING CORPORATION P.O. BOX 543 PORT MORESBY	MORESBY CHIEF	77.19	STEEL CARGO
RABAU SHIPPING CO. P.O. BOX 276 RABAU	JEAN-R	12.97	WOOD CARGO
	MARLOW	11.37	" "
	BUKE	11.53	" "
RABIA SHIPPING LTD C/- P.O. BOX 75 PORT MORESBY	PURARI	29.30	STEEL CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
SPAN ENTERPRISES P/L P.O. BOX 3401 PORT MORESBY	KOONWARRA SPAN GOOD NEWS II	16.00 14.21 11.41	WOOD CARGO STEEL CARGO WOOD CARGO
STEAMSHIPS TRADING COMPANY LTD P.O. BOX 1 PORT MORESBY	RIVER MORI LAE CHIEF OK MENGA OK TARIM STEEL NAVIGATOR STEEL VOYAGER STEEL MARINER STEEL RANGER STEEL HAULER KAPARI AGUTOI CHIEF ERIMA CHIEF MOALE CHIEF MOTUAN CHIEF HIRI CHIEF BERNARD FRANK	16.25 76.81 22.27 22.18 45.74 45.75 45.74 36.59 54.88 13.60 30.43 40.63 30.43 37.36 55.69 28.10	STEEL TUG STEEL CARGO " TUG " " " DUMB BARGE " " " " " " " " " " TUG " BARGE " " " " " CARGO " " " "
TOLO SHIPPING P/L P.O. BOX 178 RABAU	TOLO	13.30	WOOD CARGO
TROPICAL DIVING ADVENTURE P/L P.O. BOX 1644 BOROKO	TELITA	18.35	TIMBER DIVE SUPPORT VESSEL
TASOI SHIPPING BUILDING PTY LTD P.O. BOX 534 RABAU	JASON II	22.80	WOOD CARGO
W.M. MIDDLETON & SONS P/L KULILI ESTATES P.O. BOX 711 MADANG	MEDEA II KANAGIO OLYMPIA TUALI II	15.24 16.46 12.57 10.65	WOOD CARGO " " STEEL CARGO WOOD CARGO
WONG (YOU) BUKA P/L P.O. BOX 36 BUKA PASSAGE	CHEBU	11.54	WOOD CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
PACIFIC ISLANDS FISHERIES PTY LTD P.O. BOX 4427 BOROKO	JUSTINE L	13.10	GRP FISHING VESSEL
PASUWE LIMITED P.O. BOX 6124 BOROKO	KUKU	17.19	WOOD CARGO
RAKAMAN SHIPPING P/L P.O. BOX 34 KAVIENG	TIKANA	25.98	STEEL CARGO
NEW GUINEA MARINE PRODUCTS PTY LTD P.O. BOX 3703 PORT MORESBY	NEW MARINE NO. 1	27.83	STEEL FISHING
	NEW MARINE NO. 2	27.83	" "
	NEW MARINE NO. 3	27.83	" "
	NEW MARINE NO. 4	27.83	" "
	NEW MARINE NO. 5	27.83	" "
	NEW MARINE NO. 6	24.17	" CARGO
	NEW MARINE NO. 7	24.17	" "
	NEW MARINE NO. 8	24.17	" "
PACIFIC SEA FOODS PTY LTD P.O. BOX 3402 PORT MORESBY	APER A I	26.08	STEEL CARGO
	APER A II	26.08	" "
	MAKAU I	26.50	" "
	MAKAU II	26.50	" "
NISSAN ISLAND SHIPP- ING PTY LTD P O. BOX 923 LAUL	KOHON	17.06	STEEL CARGO
DEPARTMENT OF PRIMARY INDUSTRY P.O. BOX 2417 KONEDOBU	MATHIAS TOLIMAN	18.27	PLASTIC CARGO
	NELIADA	17.37	STEEL CARGO
	DER-YANG	29.26	" PATROL VSL
	LOLORUA	11.30	WOOD CARGO
	MARAKARA	17.27	FISHING VESSEL
	MELISA	16.8	STEEL FISHING VESSEL.
	KULASI	23.06	STEEL FISHING VESSEL.
APIETUTU GROUP P.O. BOX 26 POPONDETTA	APIETUTU	12.66	WOOD CARCO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
COMMONWEALTH NEW GUINEA TIMBERS LTD P.O. BOX 88 BULOLO	BUSU	11.00	STEEL CARGO
DUDU GROUP CATHOLIC MISSION WITU PRIVATE MAIL BAG KIMBE	CHRISTOPHER	13.66	WOOD CARGO
MUALIM BUSINESS GROUP P.O. BOX 385 RABAU	MUALIM	12.95	WOOD CARGO
JOIMAN MORRIS C/- P.O. BOX 711 MADANG	KASELI	13.40	WOOD CARGO
TOPOHURE BUSINESS GROUP P.O. BOX 1840 LAE	MERWEDE	12.90	STEEL TUG
MOROBE PROVINSEL GOVERNMENT P.O. BOX 1834 E	SITE	13.95	WOOD CARGO
AWASA BALE BUSINESS GROUP BUSAMA VILLAGE	AWALI	10.62	WOOD CARGO
RAYMOND JAMES STEWART P.O. BOX 40 BWAGOIA MILNE BAY PROVINCE	LILIVASO	13.12	WOOD CARGO
KAYEL SHIPPING P/L P.O. BOX 389 RABAU	MALIS	28.30	STEEL CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
PANTAVAL PTY LTD P.O. BOX 507 PORT MORESBY	LAKANUKI	14.10	STEEL FISHING VESSEL
ARNOLD MARION C/- SAIDOR GOVT. STATION MADANG PROVINCE	PETRUS I	11.47	WOOD CARGO
MILNE BAY DEVELOPMENT CORPORATION LTD P.O. BOX 219 ALOTAU	MUYUWA	11.45	WOOD CARGO
MANUS COASTAL FISHERIES P.O. BOX 202 LORENGAU	LOHANI	10.70	WOOD CARGO
UASSUM SHIPPING P.O. BOX 245 KAVIENG	KAMBUBU II	11.99	WOOD CARGO
PNG ADVENTIST ASSOC. P.O. BOX 86 LAKE	VINARETOKAE	12.68	WOOD CARGO
KARKAR KAMPANI P/L C. DOGOWAN PLANTATION, KARKAR ISLAND	KARWELL SAMIRI ULUMAN	12.25 10.40 11.51	WOOD CARGO " " STEEL CARGO
KAYEL SHIPPING PTY LTD P.O. BOX 389 RABAU	LADY NOREEN	9.95	STEEL CARGO
PAKAKOLKOL BUSINESS GROUP MOLOT PATROL POST DUKE OF YORK ISLANDS	NUNAIKI	11.57	WOOD CARGO
PROV. TRUSTEES OF THE ANGELICAN OF PNG P.O. BOX 304 LAKE	MAC CLAREN KING III	13.39	WOOD CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
SOGU PTY LTD P.O. BOX 1290 LAE	ST. GEORGE II	11.60	WOOD CARGO
GULF SOHBU FISHERIES P/L, P.O. BOX 3277 PORT MORESBY	BULOLO I	22.10	STEEL FISHING
PAPINDO TRADING CO. PTY LTD P.O. BOX 885 LAE	VIKING B	14.20	WOOD FISHING VESSEL
R & M POCKOCK P.O. BOX 173 ALOTAU	TRY III	11.56	WOOD CARGO
NEISENAL 21 PTY LTD P.O. BOX 169 RABAU	GASTALA	19.26	STEEL CARGO
ST. GEORGE SHIPPING CO. P/L P.O. BOX 1720 LAE	KIMBE EXPRESS	34.02	STEEL COASTAL PASSENGER FERRY
CURTAIN BROS (PNG) LTD P.O. BOX 441 BOROKO	BOSAVI	53.74	STEEL LANDING CRAFT. STEEL OFFSHORE SUPPLY SHIP.
	BOSISA	51.11	
DARU FISH SUPPLIES PTY LTD P.O. BOX 1390 BOROKO	TOARIPI	13.40	WOOD FISHING
SAM BABUDA C/- P.O. BOX 7 GOOD ENOUGH ISLAND	GEORGINA	14.00	WOOD CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
WETA MARINE BUSINESS GROUP P.O. BOX 372 LAE	WETA	11.30	WOOD CARGO
PAM BUSINESS GROUP (INC) P.O. BOX 181 LORENGAU	PAM MADANG	11.43	WOODEN OPEN WORK BOAT
J P & L.R SEETO P.O. BOX 668 MADANG	SEPIK	11.56	WOODEN OPEN WORK BOAT
EAST NEW BRITAIN PROV. GOVERNMENT P.O. BOX 714 RABAU	KURIAP	11.98	GROUP FISHING VESSEL
GULF PAPUA FISHERIES P.O. BOX 1277 PORT MORESBY	GULF STAR I	21.91	STEEL FISHING VESSEL
	GULF STAR II	21.91	STEEL FISHING VESSEL
UTHWIND MARINE (PNG) PTY LTD P.O. BOX 5576 BOROKO	SILVER BAY	14.90	TRANSVERSE STEEL BOAT
MULLINS BAY MARINE P/L P.O. BOX 5349 BOROKO	DEE J	18.60	STEEL FISHING VESSEL
HMS KARAO JOINT VENTURES P.O. BOX 1225 PORT MORESBY	CAREEL	14.30	TRANSVERSE STEEL FISHING VESSEL
LAINTEARAI SHIPPING GROUP P.O. BOX 446 RABAU	ALENA	12.68	WOOD CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
CORAL SEA SHIPPING 4TH FLOOR MOGURU MOTO BUILDING CHAMPION PARADE PORT MORESBY	NIUGINI KULA	68.28	STEEL CARGO
MAINGEN BUS. GROUP ARCH CAMP P.O. BOX 113 KAVIENG	MASINA	12.85	WOOD CARGO
G MARITIME PTY LTD P.O. BOX 1367 PORT MORESBY	PNG TRADER	98.77	STEEL CARGO
LUABAR LOGGING P/L P.O. BOX 1269 PORT MORESBY	STEEL ROVER	45.00	LONG FRAMED STEEL BARGE
CHIEDA GILDEN BUSI- NESS GROUP (INC) BUO VILLAGE C/- PAMBWA BASE CAMP ROSSEL ISLAND	LADUWA	12.00	WOOD CARGO
DAIAN ANTHONY HULL P.O. BOX 473 PORT MORESBY	DUCK SOUP	10.49	GRP CANOE STERN KETCH RIGGED YATCH
LEVUNA FAMILY BUSINESS GROUP C/- DEVELOPMENT BANK P.O. BOX 136 KAVIENG	GINETU	11.46	WOOD OPEN WORK BOAT
KINARO YUWANG GROUP SIO VILLAGE PATROL POST WASU MOROBE PROVINCE	KINARO	11.30	WOOD CARGO
LALADA BUSINESS GROUP P.O. BOX 1131 LAE	LALADA	10.60	WOOD CARGO
YAMARIK BUSINESS GROUP KARKAR ISLAND MADANG	YAMARIK	11.35	WOOD CARGO



OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
PNG TRAVEL SERVICE PTY LTD P.O. BOX 6826 BOROKO	REEF EXPLORER I	13.30	GRP TOURIST LAUNCH
GREGORY KENNETH GRAHAM P.O. BOX 347 PORT MORESBY	MARINE LOUISE	11.20	GRP PLEASURE CRUISER
WAMA MARINE PRODUCTS P.O. BOX 308 WEWAK	CEE B	11.80	STEEL FISHING VESSEL
CATHOLIC MISSION KAVIENG P.O. BOX 49 KAVIENG	DAULA	11.47	WOOD CARGO
SIASSI SEAFOODS PTY LTD P.O. BOX 120 TARAKA MOROBE PROVINCE	GAMUMU	10.29	WOOD CARGO
HENRY GARDETTE P.O. BOX 40 LOUSIA LNE BAY PROVINCE	LABINI	13.65	WOOD CARGO
URUKOK TAMANDUN MOLOT PATROL POST DUKE OF YORK ISLANDS	URUKOK	11.37	WOOD CARGO
UNIAPA INVEST BUSS. GROUP (INC) C/- UNEA CATHOLIC MISSION BALI WITU ISLAND VIA KIMBE	DEVARE	12.90	WOOD CARGO

OWNERS/AGENTS	NAMES OF VESSELS	REGISTERED LENGTH IN METRES	TYPE OF VESSEL
ATAHAH WESKOS ASSOC. P.O. BOX 103 LORENGAU	SUNAM	13.47	WOOD CARGO
IMAT BUSS. GROUP INC. C/- PROVINCIAL GOVT OF MANUS P.O. BOX 190 RENGAU	MALUAN SOLOK	12.03	WOOD CARGO
LOANG MILENG LITLIT MARINE EXPRESS P.O. BOX 2073 YOMBA MADANG	PIDENG	11.35	WOODEN CARGO

## ANNEX 2

### SUB-COMPONENTS OF THE CONTINGENCY PLANNING PROCESS

#### I. Components of Administrative Contingency Plans:

1. Define authority, purpose and objectives;
2. Establish policy;
3. Delegate authority;
4. Provide financial resources;
5. Designate institutional, personnel and material resources to be used in response;
6. Establish the role of the spiller, industry and/or government(s); and
7. Establish common or core resources for use of sub-entity plans (i.e., equipment, supplies and training programs).

#### II. Components of Site-Specific Contingency Plans:

1. Develop local site version of administrative plan components;
2. Evaluate resources to be protected, such as
  - a. environmental systems (estuaries, marshes, breeding grounds),
  - b. economic systems (beaches, aquaculture, resort areas, fisheries, marinas);
3. Develop the response goals and priority of action consistent with the value of resources and likelihood of impact;
4. Determine mechanism for initiating action;
5. Develop the framework of authority, responsibility and hierarchy of response to be followed in the area (i.e., spiller, industry group, government, contractor);
6. Inventory the various resources available to deal with the expected problem, such as
  - a. laws
  - b. agreements
  - c. management structure
  - d. communications
  - e. specialized equipment and supplies
  - f. traditional equipment and supplies
  - g. money
  - h. land
  - i. engineering plan
  - j. response personnel
  - k. technical assistance personnel
  - l. construction
  - m. background studies (i.e., environmental)
  - n. logistical support;

7. Develop the detailed response strategy for control, including equipment placement, protective booming containment and removal locations, removal devices, and chemical application devices, for the expected problem;
8. Develop the detailed technical response strategy, such as to
  - a. provide technical input to the design process,
  - b. provide needed technical information,
  - c. document the behavior and impact of spills,
  - d. assess the damage caused by spill and response;
9. Evaluate needed resources in excess of those already available (see item 6);
10. Develop a plan for acquisition of the needed resources;
11. Develop detailed job descriptions for people who will staff a response team;
12. Develop procedures to test the readiness of the plan or its components; and
13. Publish the plan for the use of those involved and for outside review and suggestions for improvement.

### III. Development of Resources Required by Administrative and Site-Specific Plans:

1. Acquire specialized equipment and supply resources;
2. Develop institutional arrangements;
3. Train personnel;
4. Carry out background engineering and scientific studies; and
5. Build specialized defenses, such as
  - a. storage
  - b. deployment
  - c. anchorages
  - d. pooling areas
  - e. disposal areas.
6. Develop the response team

### IV. Post-Spill Activity - Assemble Response Management Entities:

1. Assemble cleanup line management staff; and
2. Assemble technical assistance staff.

### V. Post-Spill Activity - Evaluate Specific Response Required:

1. Evaluate nature, size and potential impact;
2. Evaluate response plan methods to be used and when (i.e., priority of operations);

3. Evaluate resource levels needed;
4. Evaluate source of resources to be used (hierarchy of response levels to be used) for cleanup;
5. Evaluate additional technical response resources.

VI. Post-Spill Activity - Carry Out Response:

1. Carry out containment, removal, disposal and/or dispersion in accordance to plans;
2. Carry out documentation of spill according to technical assistance plan; and
3. Carry out damage assessment according to technical assistance plan.

VII. Post-Spill Activity - Document and Critique Response and Plan:

1. Evaluate the effectiveness of the spill control response;
2. Evaluate the effectiveness of the technical response;
3. Evaluate the effectiveness of previous contingency plan; and
4. Make recommendations for future plan revisions and responses.

Source: UNEP Regional Seas Report and Studies No.4  
"The Status of Oil Pollution and Oil Pollution Control  
in the West and Central African Region" 1982.

### ANNEX 3

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#### MEMBERSHIP IN THE PNG SHIPPERS COUNCIL AND ITS COMMIT- TEES

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1. Membership in the Council and its Committees generally comprise of shippers, producers and/or organisations which have interests in relation to outward liner cargo shipping.

2. Membership can be classified according to three types:

a) Direct Members

-----

Represent shippers or producer of export commodities of cargoes that have a direct interest in outward liner cargo and are accorded voting rights based on freight paid in particular trade routes.

b) Ex-officio Members

-----

Limited to Government representation and carry no voting rights.

c) Associate Members

-----

Refer to persons or organisations who are not shippers, producers or exporters but are considered to have an interest in shipping (e.g. Forest Industries Council). Associate members have a voting right of one (1) vote.

3. Initial Membership of the Council to include:

Exporters/Producers

-----

New Britain Palm Oil Development Ltd.  
Higaturu Oil Palm Pty. Ltd.

New Guinea Cocoa (Export) Co.Pty.Ltd.

PNG Forest Products Pty.Ltd.

Coffee International

Angco Pty.Ltd.

Coconut Products Pty.Ltd.

#### Associations

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Planters Association of PNG.

PNG Chamber of Commerce.

Forest Industries Council.

PNG Cocoa Industry Board.

Western Highlands Tea Association.

Palm Oil Products Association.

#### Government

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Department of Transport

Department of Finance

Department of Primary Industry

4. Membership of the PNG Shippers Council could be expanded in the future.

## VOTING RIGHTS

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1. Voting rights of members shall be determined on the basis of freight paid on shipment of commodity from PNG under outward liner cargo shipping conditions.
2. A standing committee to be known as "Votes Determination Committee" shall calculate and recommend to the Council the voting rights of members in the Council and each Trade Area Committee:
  - . Calculations shall be made on the basis of freight paid by each commodity;
  - . In those cases where this information is not available; the commodity concerned shall provide information to assist the Committee to determine the extent of their involvement and shall consult with the Committee to arrive at a mutually acceptable basis for vote determination;
  - . failing agreement, the standing committee shall recommend figures of its own determination.
3. The members representing exporters and/or producers of a commodity shall, in the aggregate, exercise no greater voting rights than the proportion of freight paid on shipments which that commodity bears to total freight paid on all commodities represented in Council.
4. During 1985, the voting rights of members shall be determined by the schedule of the Constitution.
5. In practice, with all members of the Council acting



responsibly, there should be little occasion for a decision of the Council coming to a vote.

## SECRETARIAT

-----

1. The Secretariat refers to the salaried officers of the Council for fixed term of recruitment and would be responsible for:
  - a) administration of the Council;
  - b) Research on shipping and allied matters;
  - c) Review of Freight Rate Submissions;
  - d) Represent the Council in discussion with other Shippers Councils.
2. The Secretariat shall initially be comprised of the following:
  - a) Executive Director
  - b) Research Officer
  - c) Secretary
3. The composition of the Secretariat may be expanded as the Council becomes fully operational and requirements or functions of the Council changes.  
(Note: the 1979 Webb Report provided for 5 permanent staff to service the Council once it becomes fully operational).

## MEMORANDUM OF UNDERSTANDING

The Governments of FIJI, PAPUA NEW GUINEA and SOLOMON ISLANDS [hereinafter called the "host Governments"] pursuant to the decision reached at the 10th meeting of the South Pacific Regional Shipping Council held at Rarotonga, Cook Islands on 20-21 April, 1982 have agreed to make available to the participating countries their maritime training schools [hereinafter called "the Regional Training Schools"] and examinations centres [hereinafter called "the Regional Examination Centres"] for purposes as hereinafter set out and the Governments of COOK ISLANDS, KIRIBATI, NAURU, NIUE, TONGA, TUVALU, VANUATU and WESTERN SAMOA have agreed not to:

- (a) compete with the Regional Training Schools by providing similar courses at Grade 4 levels or above; and not to
- (b) issue certificates entitled "Pacific Region" unless the candidate has been examined and found competent by an approved Regional Examiner.

PROVIDED THAT acceptance of the Memorandum of Understanding by host Governments will not prejudice the nature of the administration or organisation of the centres and the obligations pertaining to the host Governments, schools and centres are as expressly set out in this Memorandum.

1. The Regional Training Schools undertake to liaise with each other to:

- (a) provide courses on Uniform Maritime Standards on a regular basis;
- (b) co-ordinate maritime training programmes with each other so as not to duplicate courses or compete unnecessarily for students from participating countries;
- (c) circulate their co-ordinated training schedules to participating countries regularly;
- (d) consider applications for courses from students at Grade 4 level or above from participating countries or their sponsors on the same terms as students of the respective home country and, in particular, applications to participate in the Solomon Islands Engineering Apprenticeship Scheme and the Fiji Deck and Engineering Cadet Training Scheme;

- (e) charge participating countries economic, but not excessive, fees for their students;
- (f) maintain the approved standards in staffing and equipment as established and amended from time to time by the Advisory Committee on Uniform Maritime Standards.

2. The Regional Examination Centres undertake to:

- (a) guarantee examination services being regularly available to suit the timing and level of courses being conducted at Regional Training Centres;
- (b) maintain adequate staffing by properly qualified staff according to the minimum standards approved by the Advisory Committee on Uniform Maritime Standards;
- (c) facilitate secondment of staff to or from other Regional Examination Centres in emergency situations;
- (d) liaise with other Regional Examination Centres in order to:
  - i) maintain and upgrade the standards and efficiency of each institution;
  - ii) share the Regional Examination Question Bank and maintain its security; and
  - iii) maintain the integrity of the regional examination system;
- (e) provide, for an economic fee, examination services at Grade 5 level in countries not possessing examination facilities where sufficient candidates make this economically viable.

MISCELLANEOUS

Amendments to this Memorandum of Understanding may be made at any time by unanimous agreement of all parties. The text of any amendment proposed by a party shall be submitted to the Director of SPEC who shall transmit it to the other parties.

The scope of training may be extended to any country which is not a signatory but has accepted the obligations contained in this Memorandum.

SIGNED for and on behalf of the )  
Government of COOK ISLANDS by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of FIJI by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of KIRIBATI by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of NAURU by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of NIUE by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of PAPUA NEW GUINEA by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of SOLOMON ISLANDS by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of TONGA by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of TUVALU by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of VANUATU by: )

in the presence of: )  
)

SIGNED for and on behalf of the )  
Government of WESTERN SAMOA by: )

in the presence of: )  
)